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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XII No. 9
September 1988

Unemployment Rate

Seasonally Adjusted
July*

ARIZONA	6.3%
Maricopa County	5.0%
Pima County	5.1%
UNITED STATES	5.4%

Consumer Price Index

U.S. - June 1988
Base = 1982-84

Wage Earner/Clerical Worker -	116.7
% Chg. Year Ago	3.8
All Urban -	118.0
% Chg. Year Ago	4.0

Phoenix - 2nd Qtr 1988
Base = 1982-84

All Urban -	119.9
% Chg. Year Ago	3.8

Tucson - 2nd Qtr 1988
Base = 1982-84

All Urban -	119.8
% Chg. Year Ago	0.9

*Preliminary

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LABOR MARKET INFORMATION
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005-6123
(602) 255-3871

Barbara Keene, Editor
Linda Van Calcar, Word Processor

Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Forecast Update

A mid-year update of the Arizona employment forecast for the rest of 1988 and 1989 has been made by the Arizona Department of Economic Security, Research Administration. As usual, the Arizona Employment Forecasting Model (AEFM) bases its forecast on key national variables that are expected in the near future.

Gross National Product (GNP), the single most important indicator of national economic performance, grew at a rate of 3.1 percent in the second quarter of 1988. Accordingly, nonagricultural wage and salary employment also grew at a healthy rate of 3.8 percent in the first six months of 1988 over the first six months of 1987. The stronger growth in the national economy has been fueled by higher export growth and an increase in plant investments. Nevertheless, much slower growth is expected in the second half of 1988 and in 1989.

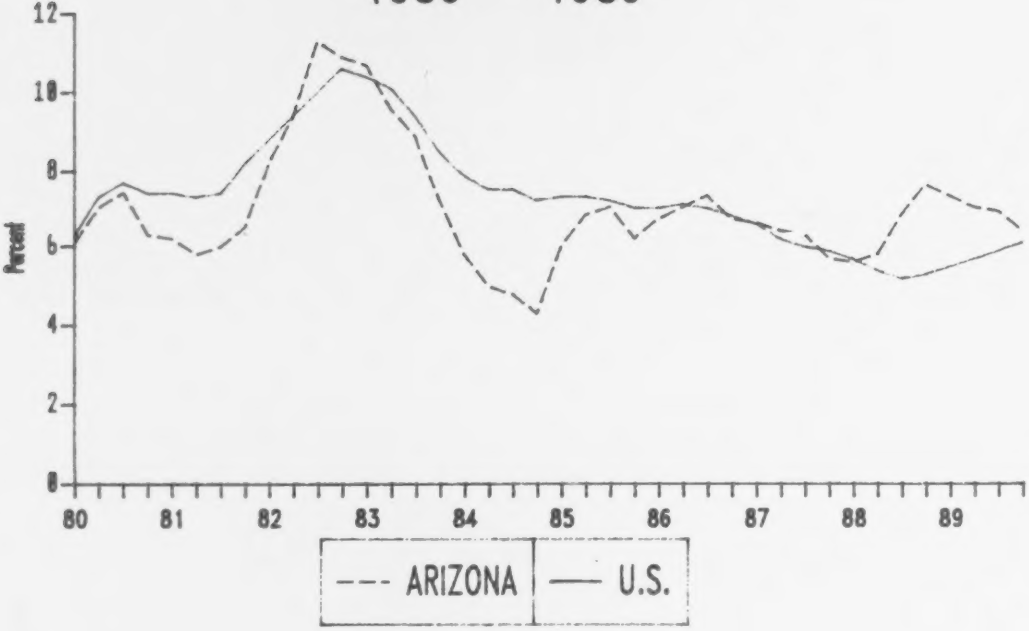
The slowdown in the national economy should follow the expected decline in plant investments due to higher interest rates in the near future and slower growth in the U.S. export sector. Increases in interest rates are expected as the Federal Reserve continues to view the national economy as overheating, promoting a build-up of inflationary trends. Higher interest rates will also negatively impact already weak consumer demand. Growth in the export sector, on the other hand, will be constrained by the availability of plant capacity, since U.S. factories, in general, are estimated to be operating at near record levels.

Few assumptions were made on the key national variables which drive the AEFM. The key assumptions made were the following:

- GNP is expected to grow at a rate of 3.9 percent in 1988 but at a sluggish rate of about 2.1 percent in 1989.
- Consumer spending will be very moderate and will advance by 1.9 percent in 1988, followed by a similar rate of 1.8 percent in 1989.
- Inflation, as measured by the consumer price index (CPI), will increase by an average of 4.2 percent in 1988 and a higher rate of 5.5 percent in 1989.
- With increased inflation, the Federal Reserve Bank is going to set tight monetary policies. Therefore, despite slow economic growth, interest rates will trend upward in the second half of 1988 and in 1989. Higher interest rates will negatively impact Arizona's economy by aggravating the already depressed housing market. Although low interest rates are desirable for Arizona's housing market, a high interest rate policy may be prescribed for the nation in order to hold down the build-up of inflationary trends in general. In addition, higher interest rates should lower the demand for all types of consumer products.
- Finally, the dollar is expected to fall at a very moderate rate during the rest of 1988 and in 1989, which should improve U.S. net exports at a moderate rate.

Arizona

Preliminary figures for the first six months of 1988 have confirmed the slow pace of economic growth in Arizona. Nonagricultural wage and salary employment in Arizona grew at an anemic rate of 2.8 percent in the


ARIZONA VS. UNITED STATES
UNEMPLOYMENT RATES
1980 - 1989

first six months of 1988, while the rate was 3.8 percent nationally. The stronger growth in the national economy has been fueled by higher export growth and an increase in plant investments. However, much slower growth is expected in the second half of 1988 and in 1989.

Major factors that slowed the state's employment growth in the first six months of 1988 were the weak performance of the manufacturing industry (1.1 percent growth) and the continued slide in construction employment (-8.1 percent). The industries that performed well in the private sector were services (5.8 percent); transportation, communications, and public utilities (TCPU, 5.1 percent); and trade (2.5 percent). Slower growth is expected to continue given the outlook for the national economy.

Overall, wage and salary employment in Arizona is forecast to grow by only 2.5 percent in 1988, followed by a similarly slow rate of 2.7 percent in 1989. The reason for the sluggish growth continues to be the expected weak performance of the manufacturing industry, declining construction employment, and the already slowed growth of in-migration to the state.

During the first half of 1988 compared to the first half of 1987, construction employment fell by 8.1 percent. Various studies report that the vacancy rates for offices, industrial space, and multifamily dwellings are still very high. As a result, the loss in construction employment, especially in the commercial building and multifamily housing sectors, should continue in 1988 and most of 1989. Even the single-family housing sector, with an outlook of higher mortgage rates in the coming months, does not offer anything positive to the overall outlook for the construction industry.

ARIZONA ECONOMIC FORECASTS
(Annual Averages, in Thousands)

	1987	Growth Rate	1988	Growth Rate	1989	Growth Rate
Labor Force	1,614.0	2.7%	1,647.2	2.1%	1,699.4	3.2%
Unemployed	101.0	-7.3	106.3	5.2	117.2	10.3
Unemployment Rate	6.3%		6.5%		6.9%	
Total Employment	1,513.0	3.4	1,540.9	1.8	1,582.2	2.7
Total Wage and Salary Employment	1,383.7	3.4%	1,418.6	2.5%	1,456.8	2.7%
Manufacturing	187.2	1.4	189.7	1.3	192.7	1.6
Mining	11.4	3.6	12.1	6.1	12.6	4.1
Construction	102.4	-9.5	94.6	-7.6	93.4	-1.3
TCPU*	72.0	9.3	73.9	2.6	75.3	1.9
Trade	339.5	4.3	350.2	3.2	362.3	3.5
FIRE**	94.4	6.2	93.8	-0.6	94.7	1.0
Services	343.9	6.2	362.4	5.4	377.3	4.1
Government	232.9	3.5	242.7	4.2	250.1	3.0

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTE: Totals may not add due to rounding.

In sum, an average decline of 7.6 percent in construction jobs is expected in 1988, and a much smaller decline of 1.3 percent is forecast for 1989.

A second factor explaining the sluggish job growth in 1988 was the weak performance of the manufacturing industry. During the first six months of 1988, this industry, as expected, grew at an anemic rate of only 1.1 percent. The machinery manufacturing sector in Arizona responded only slightly to the fall in the value of the dollar, whereas the nation's machinery sector responded quite positively. Job growth in this sector in Arizona was only 2.2 percent in the last six months. However, the positive growth was swamped by job losses in defense-related employment. Aircraft and missiles manufacturing employers reduced their work force by 4.0 percent through June of this year. Given the federal budget deficit, the outlook for defense-related employment is not positive. Taking all this into consideration, the manufacturing industry is expected to grow by only 1.3 percent in 1988, followed by 1.6 percent growth in 1989.

The mining industry in Arizona has responded quite impressively to the increase in the price of copper in the past year. This industry added 700 new jobs during the first six months of 1988 and is expected to perform similarly in the second half of the year, given that copper prices will remain at current high levels and given the improved competitiveness of this industry. Even though the absolute number of jobs gained will not be spectacular, it should definitely improve the rural and Tucson-area economies in 1988 and 1989.

With the weak outlook for the goods-producing sector of Arizona's economy, the service-producing sector will grow at very moderate rates in 1988 and 1989. Among the service-producing industries, services and trade will create most of the new jobs. The services industry is expected to grow by 5.4 percent in 1988, followed by 3.2 percent growth in the trade industry. The largest gains should be in business services, health services, hotels and lodging, and food stores.

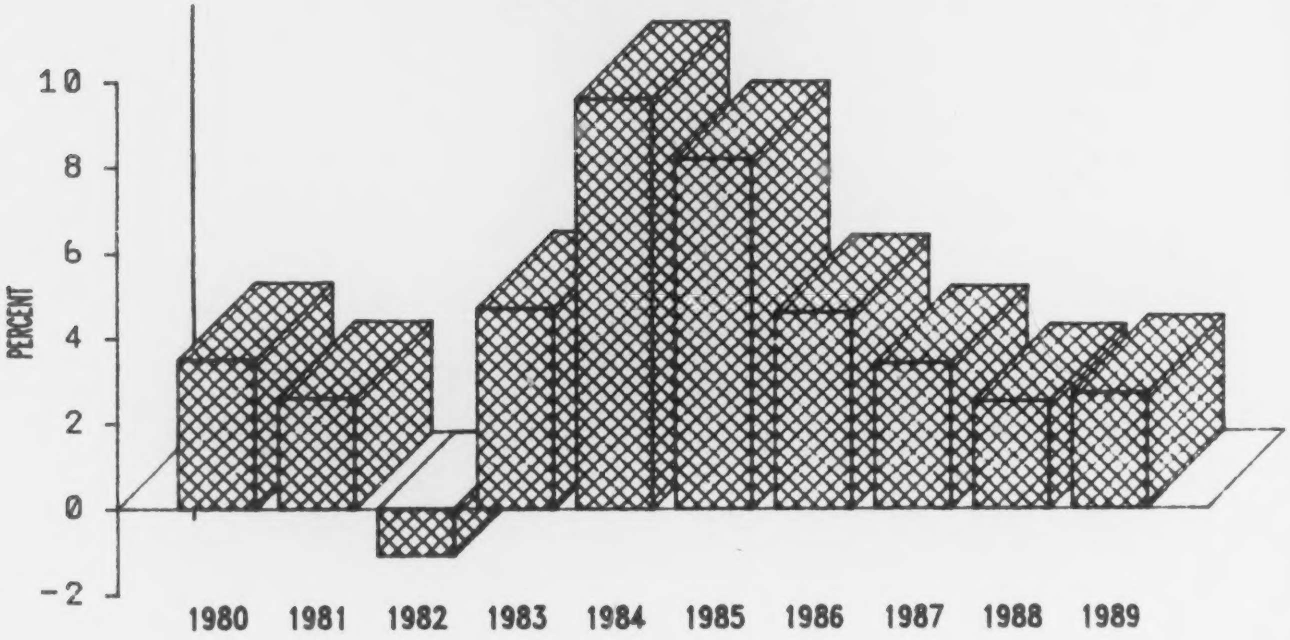
Growth of finance, insurance, and real estate (FIRE), which previously created a large number of new jobs, slowed considerably in the first half of this year. The considerable slowdown experienced by the finance sector is the result of banking deregulation and the introduction of new technology. Meanwhile, the real estate sector is affected mostly by weakness in the construction industry. FIRE is expected to register a job loss of 0.6 percent in 1988 and a slight upturn in 1989.

The TCPU industry performed at a moderate rate in the first half of 1988 and is expected to grow by an average rate of 2.6 percent in 1988, followed by 1.9 percent growth in 1989. Government is expected to grow by 4.2 percent in 1988 with most of the growth to be seen in the school sector.

Overall, Arizona wage and salary employment is forecast to grow by 2.5 percent in 1988 (34,900 jobs), followed by 2.7 percent in 1989 (38,200 jobs). Sluggish job growth and more stable labor force growth in the near future will increase the state's number of unemployed. It is forecast that the unemployment rate in 1988 should average 6.5 percent, followed by 6.9 percent in 1989.

Jalal Ahmad

ARIZONA WAGE AND SALARY GROWTH RATES 1980 - 1989

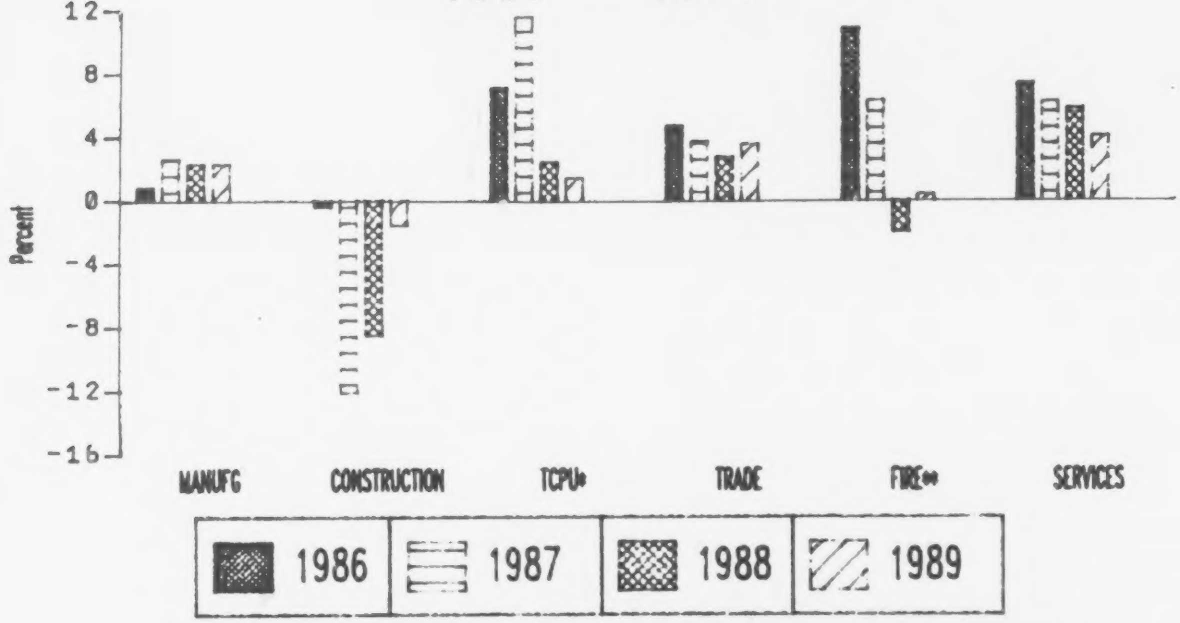


Maricopa County

The economy of Maricopa County reflects the state's economy. In other words, the factors which determine growth in the Phoenix area also influence the health of Arizona's economy. The large influence of what happens in the Phoenix area on the state economy is due to the fact that Maricopa County represents nearly 66 percent of the state's total wage and salary employment. Wage and salary employment in the Phoenix area grew by only 2.6 percent in the first six months of 1988 over the first six months of 1987. The slow growth was accompanied by an even slower growth in the labor force, which grew at a very moderate rate of 1.6 percent. The slower labor force growth resulted in an average unemployment rate of 4.7 percent in the first six months of 1988. Slower labor force growth was caused by factors such as slower net in-migration to the Valley, stablized labor force participation by women, and, finally, weak job opportunities over all. Sluggish job growth in the Phoenix area, on the other hand, was the result of the poor performance of manufacturing, the continued slide in construction, slower activities in finance and real estate, and slower growth in the population-serving industries.

The manufacturing industry in the Phoenix metropolitan area added 2,500 new jobs (1.9 percent) in the first six months of 1988 over the first six months of 1987. The durable manufacturing sector added about 1,100 jobs of which the machinery sector contributed nearly 1,000 new jobs. The growth in the machinery sector was caused by the improvement in the nation's exports. The machinery sector is expected to

MARICOPA EMPLOYMENT GROWTH RATES IN
SELECTED INDUSTRIES
1986 - 1989



* TCPU = TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES
** FIRE = FINANCE, INSURANCE, AND REAL ESTATE

MARICOPA COUNTY ECONOMIC FORECASTS
(Annual Averages, in Thousands)

	1987	Growth Rate	1988	Growth Rate	1989	Growth Rate
Labor Force	1,001.1	2.9%	1,021.1	2.0%	1,053.8	3.2%
Unemployed	52.1	-4.1	53.6	2.9	59.2	10.4
Unemployment Rate	5.2%		5.2%		5.6%	
Total Employment	949.0	3.3	967.5	1.9	994.6	2.8
Total Wage and Salary Employment	912.7	3.4%	935.4	2.5%	961.2	2.8
Manufacturing	135.7	2.6	138.8	2.3	142.0	2.3
Mining	0.6	0.0	0.6	0.0	0.6	0.0
Construction	69.2	-12.1	63.3	-8.5	62.3	-1.6
TCPU*	49.0	11.6	50.2	2.4	50.9	1.4
Trade	230.9	3.7	237.1	2.7	245.5	3.5
FIRE**	74.8	6.3	73.9	-1.2	74.2	0.4
Services	231.6	6.2	245.0	5.8	254.9	4.0
Government	120.9	4.0	126.5	4.6	130.8	3.4

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTE: Totals may not add due to rounding.

perform in a similar fashion during the rest of 1988 and in 1989.

The stone, clay, and glass sector, on the other hand, lost 700 jobs in the first six months of 1988 over the first six months of 1987, mostly because of the declining construction industry. The stone, clay and glass sector should continue to see job losses during the remainder of this year and most of 1989. The durable manufacturing sector is forecast to add 1,600 jobs (1.5 percent) in 1988 and 2000 jobs (1.8 percent) in 1989.

The nondurable sector performed better than the durable sector by adding 1,500 jobs (5.2 percent) in the first six months of 1988 over the first six months of 1987. This sector is expected to add nearly 1,500 jobs in 1988, followed by 1,200 in 1989. Given the overall outlook for the nation's export sector, the manufacturing industry in the Phoenix area is expected to grow at a moderate rate of 2.3 percent in both 1988 and 1989.

The construction industry is very vital for growth of the Phoenix-area economy. Between 1982 and 1985, this industry added nearly 34,900 jobs, leading the overall economic growth in the past. Spectacular growth in this industry was fueled by healthy growth of in-migration. In fact, more spaces were built than needed at that time. As a result, the industry ended with an excess of unused spaces. The overbuilding of industrial and commercial spaces, accompanied by slower in-migration to the Valley, has been cutting into the construction work force. Since September of 1985, a total of 17,800 construction jobs have been lost, retarding overall growth in the Valley.

Several reports suggest that the vacancy rate is declining but is still very high, and this condition is expected to continue for many months to come. The outlook for the housing sector has been further impaired by the recent upward trend of mortgage rates. Taking all this into consideration, the construction industry is forecast to reduce employment by 8.5 percent in 1988 and by 1.6 percent in 1989. It will not be until 1990 that net additions to this industry will be made.

Finance, insurance, and real estate (FIRE), which used to add hundreds of new jobs, has slowed considerably during the past few months, adding only 500 jobs in the first six months of 1988 over the first six months of 1987. The slowdown in the finance sector was due to both banking deregulation and the wide use of self-banking. Employment in the real estate sector was retarded by weak activity in construction and less in-migration to the Valley. Overall, FIRE is forecast to lose 900 jobs (1.2 percent) in 1988, followed by a net addition of 300 jobs (0.4 percent) in 1989.

Transportation, communications, and public utilities (TCPU) also experienced very modest growth in the first six months of 1988. The modest growth portrays the slowdown in net in-migration to the Valley. This industry is expected to add 1,200 jobs in 1988 and only 700 jobs in 1989.

The services and trade industries also experienced moderate growth in the first half of 1988. These two industries, however, will still add most of the new jobs in the private sector in 1988 (19,600 jobs) and in 1989 (18,300 jobs). The level of tourist activities and winter visitors to the Valley will largely determine the performance of these two industries. The services industry alone will add 13,400 new jobs (5.8 percent) in 1988 and 9,900 jobs (4.0 percent) in 1989. Most of this growth will be seen in hotels and other lodging places, health services, and business services. Trade will add 6,200 jobs (2.7 percent) in 1988, followed by 8,400 jobs (3.6 percent) in 1989. Eating and drinking places, along with food stores, will contribute most of the new jobs in this industry.

Government, which includes federal, state and local, and school employment will contribute about 5,600 jobs in 1988. Of the total, a majority of the jobs will be added in the school sector, followed by the state and local government sector. Growth in the federal, state, and local government sectors will be constrained in the near future by national and state budget deficits.

Overall, the near-term outlook for the county is modest, but the long-run outlook continues to be bright. The county is forecast to add 22,700 jobs (2.5 percent) in 1988, followed by 25,800 jobs (2.8 percent) in 1989. The weaker growth in wage and salary employment, accompanied by slower labor force growth, will keep the county's unemployment rate at 5.2 percent in 1988, but a higher rate of 5.6 percent is forecast for 1989.

Jalal Ahmad

FORECAST UPDATE CONTINUED ON PAGE 14

The Arizona Labor Force in July

In recent months, job losses had not translated into higher levels of unemployment as job seekers left the state in search of employment elsewhere, or they simply did not search for another job. But in July, that trend came to an end. The number of people unemployed in Arizona rose by 10,200 which pushed the unemployment rate from its prior level of 5.8 percent to 6.3 percent. This is the highest level the unemployment rate has reached in a year, and it appears likely to continue rising in the months ahead.

The economy was influenced by a combination of negative seasonal factors and lackluster economic growth in July. On the seasonal side of the economy, agricultural activity is at its lowest point of the year and tourism business has reached its peak in the state's northern counties. Meanwhile, manufacturing had its first employment loss in five months, and the real estate industry remains depressed.

The real estate industry continues to suffer the greatest difficulties in Arizona. Foremost in most people's mind is the construction industry. While a modest 300 jobs were added in July, this is considered only a temporary improvement that will be lost by September. Overall, the industry has lost 8,400 jobs since a year ago and 21,100 (18.0 percent) from its peak level in June 1986. The combination of high vacancy rates in multifamily housing, a slowly growing population, and rising interest rates all combine to depress the outlook for construction. It now appears that recovery in the industry will have to wait until 1990.

With the difficulties that the real estate industry is facing, it is not surprising that the finance, insurance, and real estate (FIRE) industry along with the transportation, communications, and public utilities (TCPU) industry is suffering from declining business. For the eighth month in a row, FIRE saw a decline in employment as 400 jobs were lost. All three sectors have suffered a decline in the last year, with the greatest losses coming in the finance and insurance areas. And even TCPU, which historically has maintained very stable employment levels, recorded its fourth month of employment reductions.

The expectation of a recovery in Arizona's economy in 1988 was predicated on an improvement in employment for the manufacturing industry. Production and employment were expected to increase as the falling value of the dollar improved our competitive position internationally and increased demand for high technology products. Unfortunately, that has not occurred to the magnitude expected. Manufacturing has grown only 1.5 percent in the last 12 months, and recent announcements of plant closings and production cutbacks do not bode well for the future.

In the population-serving industries of trade and services, total job losses were 3,700 as the annual summer doldrums produced seasonal losses. Combined with the loss of 9,900 jobs in government as schools continued to release staff during the summer vacation season, July recorded significant, but temporary, employment declines.

Arizona's economic outlook has recently deteriorated. While a recession in 1989 is not expected, growth will be minimal. Higher interest rates will definitely retard any expansionary forces, and manufacturing will at best be lackluster. Although 1989 will still be a year of job growth, that growth is expected to be very slight, and the unemployment rate is expected to rise. The rest of 1988 and all of 1989 will be characterized by rising unemployment and slowing job growth.

Dan Anderson

Arizona Labor Force and Employment

July 1988 (in thousands)

	Arizona				
				Amount Change	
	July* 1988	June 1988	July 1987	June-July	1987-1988
TOTAL CIVILIAN LABOR FORCE**	1619.1	1619.1	1590.7	+0.0	+28.4
Total Unemployment	109.0	98.8	107.7	+10.2	+1.3
Rate	6.7	6.1	6.8	----	----
Rate (Sea. Adj.)***	6.3	5.8	6.4	----	----
Total Employment	1510.1	1520.3	1483.0	-10.2	+27.1

The Above Labor Force Statistics Should Not Be

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	July* 1988	June 1988	July 1987	June-July	1987-1988
TOTAL WAGE AND SALARY	1376.2	1390.1	1357.6	-13.9	+18.6
Manufacturing	189.6	189.7	186.8	-0.1	+2.8
Durable Goods	146.6	146.8	146.0	-0.2	+0.6
Stone, Clay, and Glass	7.5	7.5	7.9	+0.0	-0.4
Primary and Fabricated Metals	15.9	15.8	16.1	+0.1	+0.2
Primary Metals	7.2	7.3	7.2	-0.1	+0.0
Fabricated Metals	8.7	8.5	8.9	+0.2	-0.2
Machinery	65.8	66.0	64.1	-0.2	+1.7
Other Durable Goods	57.4	57.5	57.9	-0.1	-0.5
Aircraft and Missiles	26.4	26.5	27.5	-0.1	-1.1
Lumber and Wood Product (Exc. Furniture)	8.8	8.7	8.6	+0.1	+0.2
All Other Durable Goods	22.2	22.3	21.8	-0.1	+0.4
Nondurable Goods	43.0	42.9	40.8	+0.1	+2.2
Food and Kindred Products	9.4	9.4	9.0	+0.0	+0.4
Apparel	4.6	4.7	4.6	-0.1	+0.0
Printing and Publishing	16.3	16.2	16.2	+0.1	+0.1
All Other Nondurable Goods	12.7	12.6	11.0	+0.1	+1.7
Mining and Quarrying	12.2	12.1	11.5	+0.1	+0.7
Copper Mining	9.1	9.0	8.5	+0.1	+0.6
Other Mining and Quarrying	3.1	3.1	3.0	+0.0	+0.1
Construction	96.2	95.9	104.6	+0.3	-8.4
Trans., Communications, & Public Utilities	73.0	73.2	72.6	-0.2	+0.4
Transportation	37.0	37.1	36.2	-0.1	+0.8
Communications and Public Utilities	36.0	36.1	36.4	-0.1	-0.4
Trade	342.6	344.3	335.8	-1.7	+6.8
Wholesale Trade	68.6	69.2	68.0	-0.6	+0.6
Retail Trade	274.0	275.1	267.8	-1.1	+6.2
General Merchandise and Apparel	41.8	41.9	41.8	-0.1	+0.0
Food Stores	45.7	45.6	42.8	+0.1	+2.9
Automotive and Service Stations	33.7	33.4	32.6	+0.3	+1.1
Eating and Drinking Places	97.2	98.1	95.0	-0.9	+2.2
Other Retail Trade	55.6	56.1	55.6	-0.5	+0.0
Finance, Insurance, and Real Estate	92.7	93.1	95.5	-0.4	-2.8
Services and Miscellaneous	355.9	357.9	343.7	-2.0	+12.2
Hotels and Other Lodging Places	38.4	39.7	34.7	-1.3	+3.7
Business Services	76.7	77.0	75.3	-0.3	+1.4
Health Services	91.2	90.9	86.9	+0.3	+4.3
Other Services	149.6	150.3	146.8	-0.7	+2.8
Government	214.0	223.9	207.1	-9.9	+6.9
Federal	43.4	43.2	44.1	+0.2	-0.7
State and Local	170.6	180.7	163.0	-10.1	+7.6
School	80.1	92.1	77.7	-12.0	+2.4

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

July 1988 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
July* 1988	June 1988	July 1987	June-July	1987-1988	July* 1988	June 1988	July 1987	June-July	1987-1988
1013.7	1009.0	993.4	+3.8	+20.3	302.9	306.1	299.8	-3.2	+3.1
52.4	48.7	52.9	+3.7	-0.5	15.8	14.7	15.2	+1.1	+0.6
5.2	4.8	5.3	----	----	5.2	4.8	5.1	----	----
5.0	4.7	5.1	----	----	5.1	4.8	4.9	----	----
961.3	961.2	940.5	+0.1	+20.8	287.1	291.4	284.6	-4.3	+2.5

sed for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

914.2	919.3	900.5	-5.1	+13.7	238.8	243.7	237.8	-4.9	+1.0
138.8	138.7	135.4	+0.1	+3.4	30.1	30.2	31.0	-0.1	-0.9
108.4	108.3	106.8	+0.1	+1.6	24.4	24.5	25.5	-0.1	-1.1
5.0	4.8	5.1	+0.2	-0.1					
10.9	10.8	10.9	+0.1	+0.0					
52.2	52.4	51.0	-0.2	+1.2					
40.3	40.3	39.8	+0.0	+0.5					
30.4	30.4	28.6	+0.0	+1.8	5.7	5.7	5.5	+0.0	+0.2
6.3	6.3	6.1	+0.0	+0.2					
3.6	3.7	3.4	-0.1	+0.2					
11.4	11.4	11.5	+0.0	-0.1					
9.1	9.0	7.6	+0.1	+1.5					
0.6	0.6	0.6	+0.0	+0.0	1.8	1.7	1.6	+0.1	+0.2
64.4	64.3	70.1	+0.1	-5.7	18.8	18.7	20.0	+0.1	-1.2
50.1	50.3	49.9	-0.2	+0.2	9.5	9.6	9.5	-0.1	+0.0
26.6	26.6	26.0	+0.0	+0.6	4.7	4.7	4.7	+0.0	+0.0
23.5	23.7	23.9	-0.2	-0.4	4.8	4.9	4.8	-0.1	+0.0
231.0	232.2	228.5	-1.2	+2.5	57.0	57.0	54.3	+0.0	+2.7
54.2	54.5	54.3	-0.3	-0.1	8.3	8.2	7.8	+0.1	+0.5
176.8	177.7	174.2	-0.9	+2.6	48.7	48.8	46.5	-0.1	+2.2
26.7	26.7	27.1	+0.0	-0.4	7.2	7.3	7.2	-0.1	+0.0
28.9	29.0	27.3	-0.1	+1.6	7.8	7.7	7.2	+0.1	+0.6
20.9	20.7	20.4	+0.2	+0.5	5.8	5.7	5.3	+0.1	+0.5
62.5	63.1	61.0	-0.6	+1.5	17.9	18.0	17.2	-0.1	+0.7
37.8	38.2	38.4	-0.4	-0.6	10.0	10.1	9.6	-0.1	+0.4
73.7	73.9	75.6	-0.2	-1.9	12.3	12.4	12.9	-0.1	-0.6
240.7	241.8	230.9	-1.1	+9.8	66.1	66.3	64.2	-0.2	+1.9
21.7	22.6	18.9	-0.9	+2.8	6.2	6.6	6.1	-0.4	+0.1
61.4	61.5	60.0	-0.1	+1.4	11.0	11.1	11.1	-0.1	-0.1
60.2	60.0	56.9	+0.2	+3.3	19.4	19.2	18.5	+0.2	+0.9
97.4	97.7	95.1	-0.3	+2.3	29.5	29.4	28.5	+0.1	+1.0
114.9	117.5	109.5	-2.6	+5.4	43.2	47.8	44.3	-4.6	-1.1

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
July 1988

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	15,125	34,100	41,525	12,125	8,350	2,950	5,350
Total Unemployment	3,300	3,075	4,250	1,450	850	350	400
Rate	21.8%	9.0%	10.2%	12.0%	10.2%	11.9%	7.5%
Rate (Seas. Adj.)**	18.1%	8.9%	9.3%	12.3%	9.8%	11.1%	7.9%
Total Employment	11,825	31,025	37,275	10,675	7,500	2,600	4,950

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	14,675	23,875	37,000	10,225	5,000	2,775	3,250
Manufacturing	850	1,175	2,950	1,300	200	75	300
Mining & Quarrying	25	100	150	1,375	0	1,600	50
Construction	1,075	1,175	1,675	600	200	200	150
T.C.P.U.	1,925	1,575	2,525	400	150	50	75
Trade	1,600	5,400	9,275	2,425	1,600	225	1,075
F.I.R.E.	325	650	800	275	125	25	100
Services & Misc.	4,325	4,500	10,125	1,800	900	125	750
Government	4,550	9,300	9,500	2,050	1,825	475	750

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	30,375	26,575	36,500	10,350	35,750	43,400
Total Unemployment	2,225	4,000	3,550	1,950	2,225	13,125
Rate	7.3%	15.1%	9.7%	18.8%	6.2%	30.2%
Rate (Seas. Adj.)**	7.3%	13.8%	8.9%	16.2%	6.5%	23.2%
Total Employment	28,150	22,575	32,950	8,400	33,525	30,275

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	21,325	19,800	28,250	8,875	24,175	24,150
Manufacturing	2,975	1,950	3,750	1,275	2,325	1,675
Mining & Quarrying	325	1,200	3,925	0	975	100
Construction	1,650	1,100	1,325	325	2,175	1,425
T.C.P.U.	1,225	1,775	1,175	500	875	1,100
Trade	6,300	4,200	5,100	3,500	6,725	7,275
F.I.R.E.	975	375	800	375	1,000	875
Services & Misc.	4,825	4,900	4,100	1,400	5,550	5,775
Government	3,050	4,300	8,075	1,500	4,550	5,925

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	July* 1988	June 1988	July 1987	July* 1988	June 1988	July 1987	July* 1988	June 1988	July 1987
Manufacturing	404.33	406.64	407.18	40.8	41.2	40.8	9.91	9.87	9.98
Aircraft & Missiles	INA	INA	503.86	INA	INA	41.3	INA	INA	12.20
Food & Kindred Prod.	343.26	343.48	400.44	40.1	39.3	42.6	8.56	8.74	9.40
Primary Metals	493.08	497.80	457.92	37.9	38.8	36.0	13.01	12.83	12.72
Machinery	409.86	410.85	408.44	41.4	41.5	40.6	9.90	9.90	10.06
Copper Mining	527.10	503.48	481.54	42.0	41.1	39.6	12.55	12.25	12.16
Construction	435.63	428.95	428.04	36.7	36.6	36.9	11.87	11.72	11.60
Utilities	633.13	633.74	619.62	41.3	43.2	43.3	15.33	14.67	14.31
Retail Trade**	248.50	249.50	250.17	33.4	33.4	33.4	7.44	7.47	7.49
Wholesale Trade	401.17	394.71	388.88	40.4	40.4	39.4	9.93	9.77	9.87

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	July* 1988	June 1988	July 1987	July* 1988	June 1988	July 1987	July* 1988	June 1988	July 1987
Manufacturing	434.51	429.73	425.80	41.7	41.6	41.1	10.42	10.33	10.36
Construction	448.91	443.17	439.67	37.1	36.9	36.7	12.10	12.01	11.98
Retail Trade**	273.94	274.16	277.23	34.2	34.1	34.1	8.01	8.04	8.13
Wholesale Trade	430.76	417.13	390.87	41.7	41.3	38.7	10.33	10.10	10.10

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	July* 1988	June 1988	July 1987	July* 1988	June 1988	July 1987	July* 1988	June 1988	July 1987
Manufacturing	370.33	383.67	363.01	38.9	39.8	38.7	9.52	9.64	9.38
Copper Mining	601.24	531.30	511.66	43.6	42.2	41.7	13.79	12.59	12.27
Construction	384.62	382.28	363.54	36.7	36.9	36.5	10.48	10.36	9.96
Utilities	584.57	577.55	562.38	41.4	41.7	42.0	14.12	13.85	13.39

* Preliminary.

** Excludes eating and drinking places.

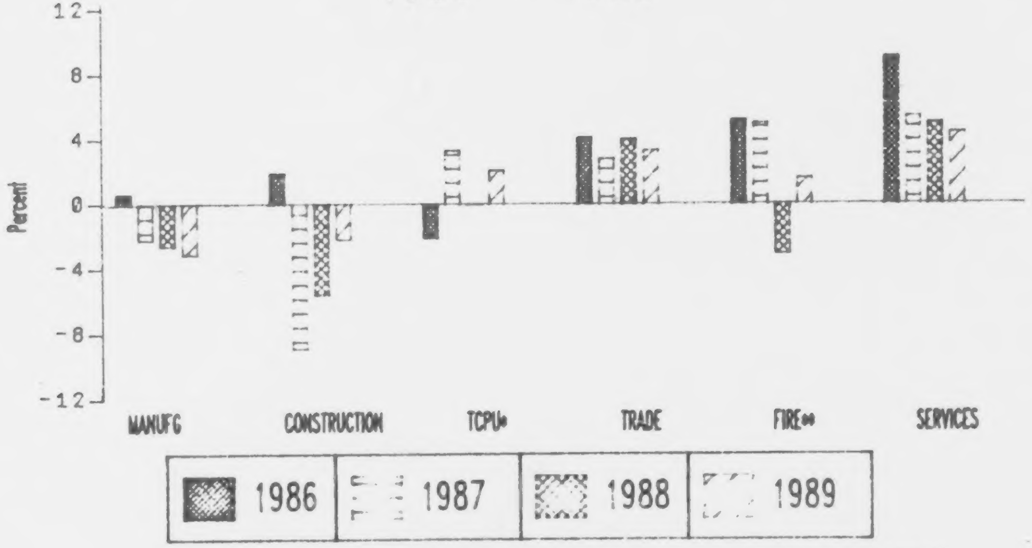
NOTE: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Pima County

The first half of 1988 presented Pima County with some troublesome economic news as major employers announced layoffs and plant closures. Despite the discouraging news, job growth remains above last year's pace. For the first six months of 1988, compared to the first six months of 1987, wage and salary employment growth was 2.7 percent while job growth for all of 1987 was 1.8 percent. More encouraging news for the county's economy is that the last six months of the year are expected to continue to provide strong employment gains as the trade and services industries gear up for the winter visitor and holiday seasons. Wage and salary employment growth is anticipated to come in at 2.1 percent for 1988 and 2.2 percent in 1989. These increases indicate that, despite the drop-offs in manufacturing and construction employment, the Tucson-area economy is diverse enough to overcome the declines.

The manufacturing industry has maintained the negative trend established in 1987. Manufacturing employment has fallen 1.0 percent in the first half of the year compared to the same period in 1987. Unfortunately, with more layoffs taking place in this industry in the last half of 1988, employment is forecast to drop 2.6 percent for the year. In 1989, the trend should continue with manufacturing employment sinking another 3.1 percent. There is good news in 1990 as Pima County's manufacturing sector is projected to rebound. A further encouragement to the Tucson-area economy is the fact that the major employers who are leaving are not leaving because they find the area to be an unsatisfactory location. They are leaving because the firms are restructuring to become more competitive and profitable. Until manufacturing bounces back, however, the local-area economy will find itself in the predicament it faced earlier in its development--relying more on tourist-related and public sector employment for its economic growth.

PIMA EMPLOYMENT GROWTH RATES IN SELECTED INDUSTRIES 1986 - 1989



* TCPU = TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES
** FIRE = FINANCE, INSURANCE, AND REAL ESTATE

PIMA COUNTY ECONOMIC FORECASTS
(Annual Averages, in Thousands)

	1987	Growth Rate	1988	Growth Rate	1989	Growth Rate
Labor Force	306.6	1.2%	311.8	1.7%	319.9	2.6%
Unemployed	15.5	-10.4	16.6	7.1	18.8	13.3
Unemployment Rate	5.1%		5.3%		5.9%	
Total Employment	291.1	1.9	295.2	1.4	301.1	2.0
Total Wage and Salary Employment	243.8	1.8%	248.9	2.1%	254.4	2.2%
Manufacturing	31.0	-1.9	30.2	-2.6	29.2	-3.1
Mining	1.6	-5.9	1.8	12.5	1.9	5.6
Construction	19.5	-8.9	18.4	-5.6	18.0	-2.2
TCPU*	9.5	3.3	9.5	0.0	9.7	2.1
Trade	55.2	2.8	57.4	4.0	59.3	3.3
FIRE**	12.7	5.0	12.3	-3.1	12.5	1.6
Services	64.6	5.4	67.8	5.0	70.8	4.4
Government	49.6	2.3	51.5	3.8	53.1	3.1

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTE: Totals may not add due to rounding.

Within the manufacturing industry, the aircraft and missiles sector and the machinery sector have been the most troublesome. Aircraft and missiles manufacturing has declined 10.1 percent during the first six months of 1988 compared to the same period in 1987. This trend should accelerate somewhat, resulting in a 10.5 percent drop for the year. With federal budget tightening, the decline is projected to continue into 1989 slipping another 3.9 percent. The following year sees the industry recovering slightly with 2.7 percent employment growth.

While the machinery sector is growing at a 3.0 percent clip for the first half of the year, this growth after last year's inferior performance was not as large as expected. The national economy has been experiencing a resurgence of manufacturing exports, but Arizona has scarcely seen this benefit. Now that export growth is expected to slow, machinery growth is anticipated to follow. In addition, layoffs in this sector will negate any growth there may have been during 1988. Machinery employment is forecast to drop off 5.9 percent before recovering in 1990 when it will begin to grow once more at a 3.2 percent rate.

In addition to the troubles in the manufacturing industry, the construction industry continued on a rocky path for the second consecutive year. The industry extended its correction phase created by overbuilding in recent years. The decline in the industry has slowed from its precipitous drop in 1987, but it is not expected to rebound until 1990 when it will see meager growth. In addition to the overbuilding which created high vacancy rates, the industry has been further plagued by rising interest rates and slowed in-migration. Construction industry employment is expected to decline 5.6 percent this year and 2.2 percent in 1989. In 1990, the industry will see an upswing with employment increasing 2 2 percent.

This year, Pima County mining employment is expected to show its first annual growth since 1981. The improved price of copper and more cost-effective extraction methods have resulted in increased production activity and hence increased employment levels. The boost in employment is smaller than in the past because the new extraction methods are more capital-intensive and less labor-intensive. The industry is not, however, anticipated to continue with such large gains as production levels off. Mining employment in 1988 is forecast to expand by 12.5 percent in 1988 and 5.6 percent in 1989.

On the service-producing side of the economy, the outlook for the last half of 1988 is better than in the goods-producing industries of manufacturing, mining, and construction. The service-producing industries (transportation, communications, and public utilities [TCPU]; trade; finance, insurance, and real estate [FIRE]; services; and government) are expected to grow by 3.6 percent in 1988, followed by 3.5 percent in 1989. Growth in these industries has fallen off primarily because of the slowed in-migration to the state. However, this growth contrasts with the decline in the goods-producing industries which will drop 3.3 percent in 1988 and 2.6 percent in 1989. Therefore, despite slower growth, the service-producing industries are still fueling the economy.

The FIRE industry will fare the worst among service industries during the next 18 months. Based on the performance through the first half of 1988, employment in this industrial category is anticipated to decline. The reasons for the drop-off are threefold: the real estate sector is highly dependent upon the construction industry which is in a contractionary phase, population growth has slowed markedly, and there is the prospect for higher interest rates. Since the prognosis for these three areas is poor through 1989, the industry is forecast to fall 3.1 percent in 1988 before increasing a slight 1.6 percent in 1989.

TCPU job growth has also slowed compared to last year when employment growth was 3.3 percent. Based on actual figures for the first half of 1988, employment is projected to remain at the 1987 level. Job growth will resume in 1989 with a 2.1 percent growth rate.

The remaining service industries will maintain fairly strong growth over the second half of 1988 and 1989. Trade employment is anticipated to outpace last year's growth with a 4.0 percent increase in 1988 and a 3.3 percent gain in 1989. Services employment will be bolstered by 5.0 percent in 1988 and 4.4 percent in 1989. The fastest growing sectors in this industry will be hotels and lodging and health services. Finally, government jobs are anticipated to grow at a 3.8 percent rate in 1988 followed by a gain of 3.1 percent in 1989.

Rosemary Reardon

Nonmetropolitan Counties

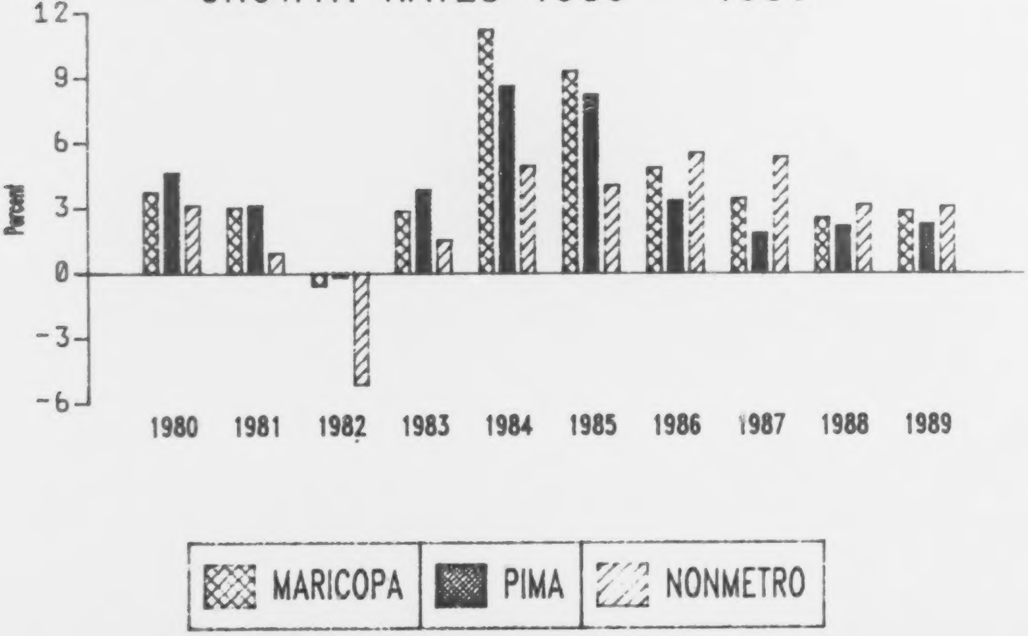
The outlook for the nonmetropolitan counties continues to be sunnier than for the metropolitan areas. Based on wage and salary employment growth for the first six months of 1988, overall growth for the year is projected to come in at 3.1 percent. In 1989, job growth is anticipated to increase at approximately the same pace, 3.0 percent. If this estimated employment growth holds true, the nonmetropolitan counties will have four consecutive years of stronger job gains than the metropolitan areas. Like the metropolitan counties (Maricopa and Pima), the service-producing industries will provide most of the momentum for economic growth. The service-producing industries (transportation, communications, and public utilities [TCPU]; trade; finance, insurance, and real estate [FIRE]; services; and government) are expected to expand by 6,900 jobs (3.8 percent) in 1988. In the following year, the rate of increase is expected to slow to 5,600 jobs (2.9 percent). The goods-producing industries (manufacturing, mining, and construction), on the other hand, are estimated to slip by 100 (0.2 percent) in 1988. In 1989, these industries are expected to snap back, adding 1,400 new employment opportunities (3.2 percent).

The unemployment rate for the first six months of 1988 averaged 10.0 percent, down from the 1987 rate of 10.9 percent. However, the unemployment rate is expected to rise during the second half of the year, with the 1988 rate averaging 11.5 percent. The rate is expected to increase again in 1989, rising to 12.0 percent.

In 1987, rural county manufacturing employment fell by 200 (1.0 percent), the first decline since the 1982 recession. While rural county manufacturing dropped by 200 in the first six months of 1988, job opportunities in this industry are expected to be up by 200 (1.0 percent) by year-end. Following the 1987 trend, nondurable manufacturing employment is anticipated to decline slightly. Contrary to last year's trend, durable goods manufacturing employment is estimated to grow, adding 300 new jobs. Total manufacturing employment is expected to increase 3.9 percent in 1989.

During 1987, when construction employment in the metropolitan coun-

METROPOLITAN VS. NONMETROPOLITAN
WAGE AND SALARY EMPLOYMENT
GROWTH RATES 1980 - 1989



NONMETROPOLITAN COUNTIES ECONOMIC FORECASTS
(Annual Averages, in Thousands)

	1987	Growth Rate	1988	Growth Rate	1989	Growth Rate
Labor Force	306.3	3.6%	314.3	2.6%	325.7	3.6%
Unemployed	33.4	-10.7	36.1	8.1	39.2	8.6
Unemployment Rate	10.9%		11.5%		12.0%	
Total Employment	272.9	5.7	278.2	1.9	286.5	3.0
Total Wage and Salary Employment	227.2	5.3%	234.2	3.1%	241.3	3.0%
Manufacturing	20.5	-1.0	20.7	1.0	21.5	3.9
Mining	9.2	4.6	9.7	5.4	10.0	3.1
Construction	13.7	5.4	12.9	-5.8	13.2	2.3
TCPU*	13.5	6.3	14.2	5.2	14.7	3.5
Trade	53.4	8.3	55.7	4.3	57.5	3.2
FIRE**	6.9	7.8	6.7	-2.9	6.5	-3.0
Services	47.7	7.2	49.6	4.0	51.6	4.0
Government	62.4	3.7	64.6	3.5	66.1	2.3

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTE: Totals may not add due to rounding.

ties fell by over 11,000, the nonmetropolitan counties avoided this slide. The nonmetropolitan counties saw a 5.4 percent increase in construction employment. The first half of 1988 paints a different picture--construction employment has fallen off 5.2 percent or 700 jobs. Most of the decline is the result of the completion of several large construction projects last year as well as this year. Overall in 1988, the number of construction jobs is expected to decline by 800 (5.8 percent). Employment growth should rebound in 1989 with a 2.3 percent gain.

Compared to the first six months of 1987, the mining industry has added 600 employees during the first half of 1988. This trend is expected to continue into the future, at least in the short run. Mining employment is anticipated to grow at a 5.4 percent pace in 1988 and slow to 3.3 percent in 1989. If the 1988 growth trend continues, this will be the second consecutive year of mining employment growth. The state's mining industry has not seen two straight years of employment gains since the early 1970s. Job growth in this sector has been spurred by favorable conditions in the world copper market and less costly extraction methods.

On the service-producing side of the economy, all industries except FIRE are forecast to enjoy moderate to healthy employment growth through 1988 and 1989. The decline in the FIRE industry is projected to follow the drop-off in the construction industry. Job creation in the industry will be hampered further by rising interest rates and belt tightening in the finance sector. Approximately 200 jobs are expected to be lost in the FIRE industry in 1988. The decline in the industry is anticipated to continue through 1989 as another 200 jobs are lost.

Employment in the nonmetropolitan trade and services industries grew 7.8 percent in 1987, adding a total of 7,300 jobs. The majority of these positions were in tourist-related industries. This trend is expected to continue through 1989. During the first six months of 1988, employment in the trade industry was up 5.7 percent or 3,000 jobs. Over-the-year growth for trade in 1988 is expected to settle at 4.3 percent. Growth in 1989 should slow further to 3.2 percent.

Services, during the first half of 1988, grew at a 5.3 percent clip, adding 2,500 new job opportunities. Growth in 1988 is anticipated to be 4.0 percent as growth slows over the remainder of the year. In 1989, the services growth rate is projected to remain level at 4.0 percent.

The TCPU industry, in the first half of 1988, increased at a 3.0 percent pace for a total of 400 jobs. This industry is expected to pick up speed later in the year, creating 5.2 percent annual job growth over 1987. While this is a strong increase, it is below the 6.3 percent expansion in 1987. The growth rate in this industry will continue to lose momentum over the next 18 months, but growth will still remain strong. TCPU employment growth in 1989 is expected to be 3.5 percent.

Over one-fourth of all wage and salary jobs in the rural counties are government positions. This pattern will continue through 1989. In 1988, the rate of increase in government employment should slow somewhat, to 3.5 percent. Growth is expected to slow further in 1989, to 2.3 percent or 1,500 jobs. The slower gains in this sector are the result of slower population growth.

While the forecast for the nonmetropolitan counties has been revised downward, the outlook for the counties is still positive. During the remaining months of 1988 and 1989, more than 8,100 job opportunities will be created in the rural counties.

Rosemary Reardon

Arizona Unemployment Insurance Activities
June 1988

	June 1988	May 1988	June 1987	% Change From One Year Ago
Claimants Served*	31,662	29,850	33,009	-4.1%
Avg. Weeks Unemployed**	8.8	8.5	9.5	-7.6%
Benefits Paid*	$13,199,851	$10,774,168	$12,316,434	7.2%
Trust Fund Balance	$444,654,121	$455,194,848	$406,957,088	9.3%

*All Programs **UI Only

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XII No. 10
October 1988

Unemployment Rate

Seasonally Adjusted
August*

ARIZONA	6.7%
Maricopa County	5.3%
Pima County	5.3%
UNITED STATES	5.6%

Consumer Price Index

U.S. - July 1988
Base = 1982-84

Wage Earner/Clerical
Worker - 117.2
% Chg. Year Ago 4.0

All Urban - 118.5
% Chg. Year Ago 4.1

Phoenix - 2nd Qtr 1988
Base = 1982-84

All Urban - 119.9
% Chg. Year Ago 3.8

Tucson - 2nd Qtr 1988
Base = 1982-84

All Urban - 119.8
% Chg. Year Ago 0.9

*Preliminary

In the October Issue:

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LABOR MARKET INFORMATION
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005-6123
(602) 255-3871

Brent Fine, Editor
Linda Van Calcar, Word Processor

Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Arizona Experiment Sparks Debate on Need for Voc Ed Disclosure

Should students be told about a vocational education institution's success in placing graduates in well-paying jobs? Is it possible to accurately measure the improve-ment of a student's economic circumstances after taking vocational education courses? Is it worth the cost of requiring disclosure of placement success? These are tough, as well as controversial, questions. Nevertheless, the Arizona Legislature attempted in 1985 and 1986 -- in the form of Senate Bill 1352 -- to find some answers.

The law said: "The Center for Vocational Education (within Northern Arizona University's Center for Education Excellence) shall: By the end of each calendar year publish and distribute a report of the placement rates and average salaries earned by persons completing vocational programs in this state. ..." The legislation sought to make vocational education programs more accountable for their budgets and required that potential students be given more consumer information on each school's vocational training.

An innovative approach was used to obtain this information. In cooperation with the Arizona Department of Economic Security's Research Administration, a staff member of the Governor's Office arranged to have tapes listing Social Security numbers of vocational education program completers matched against employment earnings reports of the Unemployment Insurance (UI) program. The Center for Vocational Education collected tapes from every Arizona public and private institution with 25 or more completers of vocational education programs. The center then published a final report on the findings, listing the results for each institution.

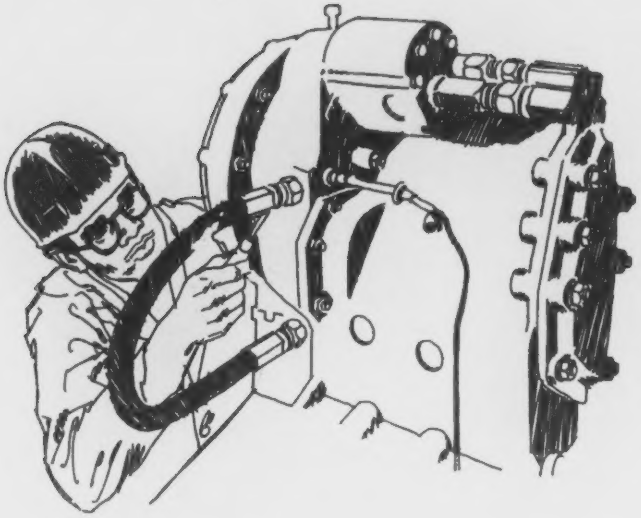
The report, A Study of Public and Private Post-Secondary Institution Vocational Education Program Completers, was released with limited circulation in June 1986. The circulation was limited because the Legislature's funding of $14,000 for the study was well below the actual cost of $50,000, the Center for Vocational Education says, which required the Center to use other funds to complete the work and reduced the number of available copies.

Was the study a success? Certainly the reduced distribution prevented it from being used extensively by vocational education consumers. Whether or not it made Arizona post-secondary vocational education more accountable for funding is also open to question. At a minimum, some lessons were learned from the experiment that may influence future attempts to provide consumer information about vocational education in Arizona or in other states.

Outcome-Oriented Standards

Outcome-based evaluation of vocational education is a practice whose time has come. Support for that assertion is evident in national employment training legislation, especially in the Job Training Partnership Act (JTPA). The JTPA requires training suppliers to meet objective, outcome-oriented performance standards. Some of the JTPA standards include placement rates, retention rates, costs per placement, average wage at placement, and welfare placement rates.

This performance information, however, is seldom made available to potential consumers of vocational training. Instead, the information is used by JTPA program administrators and private industry councils



to assist them in choosing sources of occupational training for their program clients. Direct disclosure to training consumers is not intended for these measures. Arizona's disclosure experiment, therefore, was unique. It applied to anyone in the employment training/vocational education business who had reason to evaluate training programs.

A Private Sector Assessment

A recent issue paper from MPR Associates of Berkeley, Calif., Information Disclosure In Postsecondary Vocational Education: Possibilities and Practices, focuses on the issue of vocational training consumer information, including experience from the Arizona experiment. The report, written by Cynthia L. Brown and Susan P. Choy, was prepared for the Policy Conference on Outcome-Based Policy Options for Vocational Education, sponsored by the National Assessment of Vocational Education.

The paper's opening paragraph emphasizes a need for consumer information on vocational education. "Economists and policy makers have long recognized the potential benefits of information disclosure. The efficiency of any market depends on consumers having full information about the quality and expected performance of what they buy. Only when consumers know what they will get for their money can they encourage the production of the best products through their patronage. Yet in many markets, consumers are poorly informed about the quality of products before they buy. ..."

Of course, Brown and Choy were leading up to the value of requiring disclosure of job placement outcomes by vocational education institutions. One reason for disclosure was put this way: "If students were able to assess whether the cost of an education were (sic) justified by future employment and earning prospects, perhaps many would avoid incurring large debts they were unable to pay because they could not find adequate employment after completing school." Another value to be realized through disclosure, the authors say, is that institutions can better assess programs directly and take actions to improve those that offer no prospects for employment.

The benefits of disclosure, however, come with costs. There are — the costs of collecting and disseminating the information, as well as properly interpreting the data. In addition, there may be a social cost if in attempting to restrict admittance to only those who are more likely to find employment, institutions raise standards that exclude the disadvantaged and high-risk groups.

Brown and Choy contend there are four requirements for effective information disclosure:

- Institutions must generate relevant, reliable measures of performance that allow comparisons among programs and institutions.

- Performance information must be available to potential students.
- Students must take the information into account when making their choices.
- Institutions must change their programs in response to the information.

The most available measures of vocational outcomes, say Brown and Choy, are the completion rate, placement rate, and expected wages. These measures, however, have a number of conceptual and practical problems that should be kept in mind when using them. For example, placement rates -- defined as the percentage of completers who find jobs related to their training -- ignore the multiple goals of vocational education, which include teaching reading, writing, and mathematics. Vocational educators would prefer to be held accountable for employability -- not employment -- because employment of students is determined by many economic and personal factors, in addition to the vocational education received. Also, a single focus on placement encourages programs to admit only students who are easiest to train and place.

This last problem, frequently referred to as "creaming," has been cited as a problem of every kind of employment and training program, as well as of vocational education. The JTPA performance standards include placement as one measure of success. (The relative success of this measure depends a lot on its operational definition. A placement for a day is not as successful as a placement held for months.)

Using completion rates as another measure of success also depends on the definition of "completion." As Brown and Choy point out, completion is a measure of employability that vocational educators are more willing to accept as a measure of their success. The definition of completion, according to Brown and Choy, is the percentage of students who have earned a degree or certificate in a recognized program. In Arizona there has been as much concern for the definition of completion as there has been for the definition of placement.

Many postsecondary vocational education students do not complete entire programs, but take only a few courses to help move up on the job. Community college administrators believe their schools should receive as much credit for these students as for completers of programs. The institutions are, after all, performing a service to the community and incurring an expense, regardless of the number of completers relative to the number of enrollments, the authors say.

Another concern about completion rates, in the words of Brown and Choy, is that "a high completion rate does not necessarily mean that the program is a good one or that it should be offered at all. If the

EARNINGS DURING 1984-85 OF COMPLETERS OF SELECTED "GENERAL NURSING" VOCATIONAL PROGRAMS IN ARIZONA*

Institutions	Completers 1983-84	Completers with Earnings 1984-85**	Percent with Earnings 1984-85	Average Earnings 1984-85***
Central Arizona College	25	20	80	$ 9,766
Glendale Community College	57	52	91	$14,508
Maricopa Technical Com. College	57	49	86	$ 7,743
Phoenix Community College	81	75	93	$16,684
Scottsdale Community College	36	34	94	$13,638

Institutions	Quarterly Average Earnings of Completers			
	1984-Q3	1984-Q4	1985-Q1	1985-Q2
Central Arizona College	$2,430	$3,091	$3,924	$3,767
Glendale Community College	$1,764	$3,999	$5,052	$4,802
Maricopa Technical Com. College	$1,678	$2,149	$2,406	$2,512
Phoenix Community College	$3,100	$4,817	$5,217	$4,802
Scottsdale Community College	$1,408	$3,680	$4,485	$4,363

* Data are based on Unemployment Insurance wage files from Arizona Department of Economic Security, taken from A Study Of Public And Private Post-Secondary Institution Vocational Education Program Completers, published by Arizona Center For Vocational Education, June 1986.

** Number of program completers that reported earnings in Arizona during the fiscal year July 1, 1984, through June 30, 1985. Data include part-time and short-term employment.

*** Average based on total amount earned by program completers reporting earnings of $1 or more during the fiscal year.

quality of instruction is poor, students may not be employable even if they complete the program. Furthermore, because employment opportunities depend on national and local economic conditions, the best training in the world will not guarantee employment upon completion if there are no job openings."

"It can be legitimately argued," the authors continue, "that if the demand for labor in a particular field is weak, institutions should not offer training in that area, no matter how exemplary the training or how high the completion rate. In sum, holding institutions accountable for completion does not force them to offer high quality programs or to be responsive to demand for labor in various occupations. Holding them accountable for placements does."

Finally, Brown and Choy offer that wage information would be extremely valuable to potential vocational students, but remind the reader once again that schools have not been very successful collecting information from students after they have completed their courses. It is here that the value of UI data bases becomes clear.

Unemployment Insurance Wage Files

UI wage files are potentially valuable because they contain quarterly wage information on nearly every individual who holds a wage or salary job in the state. This data base is a highly reliable source of placement data and more comprehensive than sample surveys, because employers must pay Unemployment Insurance taxes for all their employees, and information on individual-level employment and earnings (which can be obtained to the penny) are used to calculate benefits.

On the down side, UI wage files are limited to only those who become employed in jobs covered by Unemployment Insurance. Those who become self-employed, join the military, or take out-of-state jobs are not included in the training state's UI wage files. Another problem is that, despite having the exact quarterly wages, wage files do not indicate whether the work is part-time, full-time, or related to the training obtained. Finally, there's about a year's lag time after the completer becomes employed and creates a wage history.

Dissemination, Student and Institutional Utilization

Brown and Choy emphasize that broad and timely dissemination is the key to assuring usefulness of information and recommend using multiple means to dispense it -- press releases to newspapers and other media outlets, reports and other compilations of data for use in libraries; and succinct brochures in public places. Even if that is done, however, there remains a question of whether potential vocational education students would use the consumer information and if institutions would modify programs based on it.

The authors site evidence that students do use reputation of placement success as one criterion for choosing a training institution. They acknowledge, however, that other criteria may take precedence in many cases. Location and availability of financial aid are two limiting criteria, especially for students who must live at home for financial reasons. Also, if the best programs are full, some students may choose lesser-quality programs anyway.

Success of disclosure also depends on institutional response to the information. Brown and Choy cite reasons why schools might resist changes suggested by the information. The cost in new equipment and personnel when opening and closing programs is one reason; another, the difficulty in reassigning existing faculty to teach different skills. But Brown and Choy contend more disclosure of employment outcomes would force many institutions to be more responsive or risk losing their funding.

In their summary analysis of Arizona's experimental program on vocational education disclosure, Brown and Choy outline the pros and cons of using the UI wage files to determine students' financial success, the institutions' reactions to the process, and data limitations. Besides the Legislature's failure to give additional funding, the authors attribute the program's demise after only one year to a lack of an organized constituency within state government and widely publicized technical problems.

Brown and Choy conclude that improving information about the expected outcomes of vocational educational alternatives is feasible, and will likely increase student choices and the quality of postsecondary vocational education.

-Ron Simon

LMI Publications -- Hot off the Press

The following recently revised publications prepared by the DES Research Administration can be ordered by writing to the address on the back of this newsletter or by calling (602) 542-3871. One copy of each publication will be sent at no charge. Multiple copies are available at a nominal charge, which helps cover the cost of printing. Other DES offices can order directly from DES Supply.

Occupational Employment Forecasts (PAL-363 to PAL-377A) are annual publications produced from information obtained through the Occupational Employment Statistics (OES) survey. The forecasts list by occupation 1988 estimates and 1989 and 1993 projections of employment levels. In addition, the number of job opportunities (openings due to growth and separations from the labor force) expected from 1988 to 1993 are given for each occupation. Individual publications are available for each county and the state as a whole.

Job Seeker's Guide (PAL-128), primarily designed for out-of-state job seekers, includes a brief overview of communities in Arizona and general information on housing, wages, cost of living, population, labor conditions, and climate. The book also lists Job Service offices and chambers of commerce.

Publication Order Form (RS-076) lists all publications currently produced by the DES Research Administration, plus price information for multiple copies. Refer to the LMI DIRECTORY for descriptions of publications.

Affirmative Action Planning Information (PAL-345 and PAL-346) are two publications prepared annually that contain 1987 estimates of population and labor force characteristics by sex, race, and Hispanic ethnicity. A new feature in the current editions is a table of 1987 Job Service applicants by occupational category. One publication (PAL-345) has data for Arizona, the state's metropolitan counties (Maricopa and Pima), and the major cities within those two counties. The other publication (PAL-346) includes data for non-metropolitan counties in the state.

The Arizona Labor Force in August

The number of Arizona's unemployed increased by 4,900 in August, raising the month's unemployment rate by 0.4 percent to 6.7 percent. This is the state's highest level of unemployment in nearly two years, and it is likely to go higher in the months ahead.

Contributing to the rise were recent job losses in the Manufacturing and Services industries, in addition to seasonal unemployment, which occurs primarily among students and agricultural workers. The national unemployment rate, meanwhile, edged upward .2 percent to 5.6 percent; more than one full percent lower than the statewide rate.

The state economy in August was influenced by seasonal forces. On the up side, school employment increased as staff and faculty returned to prepare for a new semester, and Construction continued its spurt of summer activity. On the down side, tourism slowed in the northern counties as the weather cooled.

Manufacturing slacked off in August after five months of gains, and the Finance, Insurance, and Real Estate (FIRE) industry continued its downturn. Job losses in Services and Trade are considered temporary, however, and employment should increase in the coming months.

Overall, these balancing forces resulted in a moderate increase of 4,600 jobs in wage and salary employment in August.

Construction continues to be a major problem area in Arizona, although the industry had an increase of 700 jobs in August. The improvement is considered temporary because of a combination of factors -- high vacancy rates in commercial and multifamily housing sectors, slowing population growth, and anticipated higher interest rates. Overall, employment in Construction is down 6,600 from a year ago and 20,300 from its peak level in June 1986.

Employment in FIRE continued to drop for the ninth month in a row. FIRE registered a decline of 500 jobs in August, and has lost 3,400 jobs (3.7 percent) from a year ago. Job losses in FIRE occurred in all three of its sectors, with finance and insurance suffering the largest casualties. FIRE is not expected to rebound until Construction recovers.

After four months of small gains, Manufacturing lost 300 jobs in August. Job losses were recorded in both the machinery sector and in defense-related businesses. Overall, Manufacturing has responded poorly to the falling value of the dollar, which was expected to increase production and employment. If this slow response continues as expected, growth in Manufacturing employment will continue to be modest the rest of the year.

In Trade and Services, 1,900 jobs were lost due to the slowdown in summer activities. Employment in Trade fell by 1,200 with the greatest losses coming from food stores, followed by eating and drinking places. Services had a decline of 700 jobs with most of the losses taking place in hotels and lodging places, health services, and recreational businesses.

August is usually a slow month for Trade and Services. But with the complete return of school staffs in September and the beginning of the winter tourism season in October, these industries should be hiring at a healthy pace during the next few months.

School employment rose by 8,100 in August and is expected to increase further in September. The rise in educational jobs helped prevent total wage and salary employment from retreating for the month.

The outlook for the Arizona economy in the coming months is mixed, with an expected modest growth in jobs, but also higher unemployment rates. Employment increases in Trade and Services will be offset by losses in Construction, FIRE, and the aerospace sector of Manufacturing.

-Jalal Ahmad

Because "Arizona Labor Force and Employment for Economic Assistance Programs" was unavailable for the September issue, two months of data are included in this issue. "Arizona Unemployment Insurance Activities," however, is unavailable for this issue.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Aug.* 1988	July 1988	Aug. 1987	Aug.* 1988	July 1988	Aug. 1987	Aug.* 1988	July 1988	Aug. 1987
Manufacturing	405.32	407.36	407.77	40.9	40.9	40.9	9.91	9.96	9.97
Aircraft & Missiles	INA	INA	526.23	INA	INA	42.2	INA	INA	12.47
Food & Kindred Prod.	330.70	342.95	402.86	39.7	40.3	43.6	8.33	8.51	9.24
Primary Metals	492.54	503.62	466.28	38.6	38.8	36.6	12.76	12.98	12.74
Machinery	416.15	407.13	394.21	41.0	41.0	39.9	10.15	9.93	9.88
Copper Mining	505.49	527.10	492.48	40.7	42.0	40.6	12.42	12.55	12.13
Construction	428.72	428.70	444.99	36.8	36.3	37.3	11.65	11.81	11.93
Utilities	659.12	638.73	620.06	42.8	42.3	43.0	15.40	15.10	14.42
Retail Trade**	248.90	249.83	249.16	33.5	33.4	33.4	7.43	7.48	7.46
Wholesale Trade	400.36	395.18	390.06	40.4	39.4	39.4	9.91	10.03	9.90

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Aug.* 1988	July 1988	Aug. 1987	Aug.* 1988	July 1988	Aug. 1987	Aug.* 1988	July 1988	Aug. 1987
Manufacturing	432.43	433.87	438.48	41.7	41.4	41.8	10.37	10.48	10.49
Construction	446.77	443.72	425.30	37.2	36.4	35.8	12.01	12.19	11.88
Retail Trade**	275.43	274.63	274.46	34.3	34.2	33.8	8.03	8.03	8.12
Wholesale Trade	426.42	421.30	393.90	41.4	40.2	39.0	10.30	10.48	10.10

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Aug.* 1988	July 1988	Aug. 1987	Aug.* 1988	July 1988	Aug. 1987	Aug.* 1988	July 1988	Aug. 1987
Manufacturing	379.37	383.90	355.51	39.6	39.7	38.7	9.58	9.67	9.21
Copper Mining	608.90	606.39	511.24	43.4	43.5	41.7	14.03	13.94	12.26
Construction	380.81	385.61	367.37	36.9	36.9	36.5	10.32	10.45	10.01
Utilities	575.31	587.44	579.83	41.3	41.9	42.0	13.93	14.02	13.74

* Preliminary.
** Excludes eating and drinking places.

NOTE: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment

August 1988 (in thousands)

	Arizona				
				Amount Change	
	August* 1988	July 1988	August 1987	July-August	1987-1988
TOTAL CIVILIAN LABOR FORCE**	1638.9	1616.9	1583.9	+22.0	+55.0
Total Unemployment	113.7	108.8	100.7	+4.9	+13.0
Rate	6.9	6.7	6.4	----	----
Rate (Sea. Adj.)***	6.7	6.3	6.1	----	----
Total Employment	1525.2	1508.1	1483.2	+17.1	+42.0

The Above Labor Force Statistics Shoul

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

TOTAL WAGE AND SALARY	1379.6	1375.0	1360.4	+4.6	+19.2
Manufacturing	189.5	189.8	188.5	-0.3	+1.0
Durable Goods	146.4	147.1	146.3	-0.7	+0.1
Stone, Clay, and Glass	7.3	7.5	8.0	-0.2	-0.7
Primary and Fabricated Metals	16.1	16.0	16.0	+0.1	+0.1
Primary Metals	7.3	7.3	7.2	+0.0	+0.1
Fabricated Metals	8.8	8.7	8.8	+0.1	+0.0
Machinery	65.7	66.0	64.5	-0.3	+1.2
Other Durable Goods	57.3	57.6	57.8	-0.3	-0.5
Aircraft and Missiles	26.3	26.4	27.4	-0.1	-1.1
Lumber and Wood Product (Excluding Furniture)	8.7	8.9	8.5	-0.2	+0.2
All Other Durable Goods	22.3	22.3	21.9	+0.0	+0.4
Nondurable Goods	43.1	42.7	42.2	+0.4	+0.9
Food and Kindred Products	9.5	9.4	9.2	+0.1	+0.3
Apparel	4.6	4.6	4.7	+0.0	-0.1
Printing and Publishing	16.3	16.3	16.5	+0.0	-0.2
All Other Nondurable Goods	12.7	12.4	11.8	+0.3	+0.9
Mining and Quarrying	12.3	12.2	11.5	+0.1	+0.8
Copper Mining	9.2	9.1	8.5	+0.1	+0.7
Other Mining and Quarrying	3.1	3.1	3.0	+0.0	+0.1
Construction	97.0	96.3	103.6	+0.7	-6.6
Trans., Communications, & Public Utilities	72.8	72.8	73.0	+0.0	-0.2
Transportation	36.8	36.8	36.5	+0.0	+0.3
Communications and Public Utilities	36.0	36.0	36.5	+0.0	-0.5
Trade	341.3	342.5	335.4	-1.2	+5.9
Wholesale Trade	68.1	68.5	67.7	-0.4	+0.4
Retail Trade	273.2	274.0	267.7	-0.8	+5.5
General Merchandise and Apparel	41.7	41.8	42.4	-0.1	-0.7
Food Stores	45.2	45.6	42.4	-0.4	+2.8
Automotive and Service Stations	33.5	33.6	32.6	-0.1	+0.9
Eating and Drinking Places	97.4	97.5	94.8	-0.1	+2.6
Other Retail Trade	55.4	55.5	55.5	-0.1	-0.1
Finance, Insurance, and Real Estate	92.0	92.5	95.4	-0.5	-3.4
Services and Miscellaneous	355.4	356.1	343.8	-0.7	+11.6
Hotels and Other Lodging Places	38.1	38.4	34.6	-0.3	+3.5
Business Services	76.7	76.5	75.8	+0.2	+0.9
Health Services	91.0	91.2	86.8	-0.2	+4.2
Other Services	149.6	150.0	146.6	-0.4	+3.0
Government	219.3	212.8	209.2	+6.5	+10.1
Federal	43.2	43.2	43.8	+0.0	-0.6
State and Local	176.1	169.6	165.4	+6.5	+10.7
School	87.0	78.9	81.8	+8.1	+5.2

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

August 1988 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
August* 1988	July 1988	August 1987	July-August	1987-1988	August* 1988	July 1988	August 1987	July-. August	1987-1988
1019.2	1010.3	985.4	+8.9	+33.8	308.6	302.8	298.4	+5.8	+10.2
54.8	51.1	49.8	+3.7	+5.0	16.6	15.7	14.6	+0.9	+2.0
5.4	5.1	5.1	----	----	5.4	5.2	4.9	----	----
5.3	4.9	4.9	----	----	5.3	5.0	4.8	----	----
964.4	959.2	935.6	+5.2	+28.8	292.0	287.1	283.8	+4.9	+8.2

Not Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

911.9	913.2	899.7	-1.3	+12.2	241.1	238.6	237.2	+2.5	+3.9
138.3	138.6	136.8	-0.3	+1.5	30.3	30.3	31.1	+0.0	-0.8
107.9	108.6	107.2	-0.7	+0.7	24.6	24.6	25.5	+0.0	-0.9
4.8	5.0	5.2	-0.2	-0.4					
10.9	10.9	10.8	+0.0	+0.1					
52.0	52.4	51.4	-0.4	+0.6					
40.2	40.3	39.8	-0.1	+0.4					
30.4	30.0	29.6	+0.4	+0.8	5.7	5.7	5.6	+0.0	+0.1
6.3	6.3	6.1	+0.0	+0.2					
3.6	3.6	3.4	+0.0	+0.2					
11.4	11.4	11.8	+0.0	-0.4					
9.1	8.7	8.3	+0.4	+0.8					
0.6	0.6	0.6	+0.0	+0.0	1.8	1.8	1.6	+0.0	+0.2
65.0	64.5	69.5	+0.5	-4.5	18.7	18.6	19.6	+0.1	-0.9
50.3	50.2	50.2	+0.1	+0.1	9.5	9.5	9.5	+0.0	+0.0
26.8	26.6	26.3	+0.2	+0.5	4.6	4.6	4.7	+0.0	-0.1
23.5	23.6	23.9	-0.1	-0.4	4.9	4.9	4.8	+0.0	+0.1
230.3	230.9	227.9	-0.6	+2.4	56.7	57.0	54.5	-0.3	+2.2
54.0	54.1	54.1	-0.1	-0.1	8.3	8.3	7.7	+0.0	+0.6
176.3	176.8	173.8	-0.5	+2.5	48.4	48.7	46.8	-0.3	+1.6
26.6	26.6	27.5	+0.0	-0.9	7.2	7.3	7.3	-0.1	-0.1
28.8	28.9	27.1	-0.1	+1.7	7.7	7.9	7.0	-0.2	+0.7
20.7	20.8	20.3	-0.1	+0.4	5.8	5.8	5.4	+0.0	+0.4
62.4	62.7	60.7	-0.3	+1.7	17.9	17.8	17.4	+0.1	+0.5
37.8	37.8	38.2	+0.0	-0.4	9.8	9.9	9.7	-0.1	+0.1
73.2	73.6	75.5	-0.4	-2.3	12.2	12.3	12.8	-0.1	-0.6
239.5	240.7	231.0	-1.2	+8.5	65.9	65.9	64.0	+0.0	+1.9
21.5	21.7	18.8	-0.2	+2.7	6.1	6.3	6.0	-0.2	+0.1
61.3	61.2	60.7	+0.1	+0.6	11.0	11.0	10.9	+0.0	+0.1
59.9	60.1	57.0	-0.2	+2.9	19.3	19.4	18.5	-0.1	+0.8
96.8	97.7	94.5	-0.9	+2.3	29.5	29.2	28.6	+0.3	+0.9
114.7	114.1	108.2	+0.6	+6.5	46.0	43.2	44.1	+2.8	+1.9

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
August 1988

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	15,725	34,050	42,300	12,525	8,475-	3,000	5,175
Total Unemployment	2,875	2,850	3,825	1,500	900	300	500
Rate	18.3%	8.4%	9.0%	12.0%	10.6%	10.0%	9.7%
Rate (Seas. Adj.)**	18.3%	8.7%	9.1%	12.3%	10.4%	10.2%	8.6%
Total Employment	12,850	31,200	38,475	11,025	7,575	2,700	4,675

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	15,275	23,975	37,825	10,400	5000	2,850	3,400
Manufacturing	825	1,250	2,900	1,300	225	75	325
Mining & Quarrying	25	100	175	1,375	0	1,600	50
Construction	1,025	1,200	1,725	575	200	200	175
T.C.P.U.	1,925	1,600	2,500	375	150	50	75
Trade	1,600	5,275	9,300	2,400	1,600	225	1,100
F.I.R.E.	325	675	775	275	100	25	100
Services & Misc.	4,525	4,500	10,450	1,850	900	125	800
Government	5,025	9,375	10,000	2,250	1,825	550	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	31,450	27,250	36,375	10,525	36,625	47,625
Total Unemployment	2,200	3,700	3,625	2,200	2,200	15,650
Rate	7.0%	13.6%	10.0%	20.9%	6.0%	32.9%
Rate (Seas. Adj.)**	7.2%	13.3%	9.3%	17.7%	6.3%	26.3%
Total Employment	29,250	23,550	32,750	8,325	34,425	31,975

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	21,850	20,425	28,050	8,700	24,600	24,175
Manufacturing	3,050	1,950	3,775	1,250	2,325	1,675
Mining & Quarrying	325	1,175	3,950	0	975	100
Construction	1,700	1,150	1,375	325	2,300	1,400
T.C.P.U.	1,275	1,800	900	500	825	1,100
Trade	6,300	4,125	5,125	3,375	6,725	7,175
F.I.R.E.	925	375	775	375	975	875
Services & Misc.	4,850	5,250	3,950	1,375	5,625	5,700
Government	3,425	4,600	8,200	1,500	4,850	6,150

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs

July 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,616,945	1,508,130	108,815	6.7%
Apache	15,088	11,876	3,212	21.3
Cochise	33,363	30,589	2,774	8.3
Coconino	41,651	37,624	4,027	9.7
Gila	12,132	10,620	1,512	12.5
Graham	8,325	7,448	877	10.5
Greenlee	2,900	2,595	305	10.5
La Paz	5,511	4,995	516	9.4
Maricopa	1,010,339	959,213	51,126	5.1
Mohave	30,736	28,642	2,094	6.8
Navajo	27,211	22,850	4,361	16.0
Pima	302,803	287,067	15,736	5.2
Pinal	35,854	32,389	3,465	9.7
Santa Cruz	10,345	8,305	2,040	19.7
Yavapai	35,804	33,706	2,098	5.9
Yuma	44,882	30,211	14,671	32.7

August 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,638,925	1,525,188	113,737	6.9%
Apache	15,713	12,839	2,874	18.3
Cochise	34,063	31,208	2,855	8.4
Coconino	42,288	38,468	3,819	9.0
Gila	12,534	11,030	1,504	12.0
Graham	8,486	7,576	910	10.7
Greenlee	3,004	2,697	307	10.2
La Paz	5,177	4,684	493	9.5
Maricopa	1,019,202	964,378	54,824	5.4
Mohave	31,448	29,245	2,203	7.0
Navajo	27,250	23,549	3,701	13.6
Pima	308,624	292,040	16,584	5.4
Pinal	36,365	32,752	3,613	9.9
Santa Cruz	10,511	8,316	2,195	20.9
Yavapai	36,620	34,427	2,193	6.0
Yuma	47,638	31,977	15,661	32.9

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events that are significant to Arizona labor markets. Due to space limitations, there is no attempt to compile an exhaustive list of events. In addition, the Arizona LMI Newsletter is not responsible for incorrect information reported from these sources.

MANUFACTURING - **International Business Machines** will phase out 2,800 manufacturing jobs from its Tucson plant during the next 18 months. IBM is moving its production of tape drives and storage-control units to other locations in the country. Employees who are affected have a choice of taking other positions out of state or accepting a generous compensation package. The move, which was announced at the end of June, leaves IBM with 2,200 employees in Tucson; 1,700 at the Tucson Development Laboratory, and 500 in marketing and services locations in the Tucson metropolitan area. Community leaders estimate a loss of $140 million in wages and tax revenue to the Tucson economy. IBM has pledged, however, to spend millions of dollars to upgrade its manufacturing facilities to attract companies to use IBM's vacated space.

Motorola is terminating 600 positions at its Government Electronics Group in Scottsdale. More than 200 employees had accepted a voluntary severance program as of mid-October. The Motorola group said in late August that the radar systems division in Tempe would be integrated with the communications division and tactical-electronics division. The restructuring caused the transfer of 1,650 workers from the radar-systems division in Tempe to the Scottsdale site and the elimination of up to 600 jobs.

Several other companies around the state have also announced layoffs, citing reduced revenue as the primary reason. **Evergreen Air Center,** which refurbishes commercial aircraft, laid off 200 employees in July at its facility near Marana. ... **Coleman Products Co.,** a subsidiary of Chrysler, will close its Nogales plant by the end of the year, eliminating 250 positions. Coleman manufactures wire harnesses for Chrysler products. ... **AiResearch Tucson Division,** which produces aerospace products, eliminated 100 clerical and maintenance positions in October. ... **Phoenix Newspapers Inc.,** publisher of *The Arizona Republic* and *Phoenix Gazette*, is eliminating 100 positions from its news, advertising, circulation and business departments. ... **Hughes Aircraft Co.** has cut about 600 technical and administrative positions from its work force in Tucson due to lower anticipated missile production. The cuts represent about 8 percent of Hughes' work force. ... **NKK Corp.** of Tokyo is shutting down Great Western Silicon, a polycrystalline-silicon plant in Chandler, eliminating 34 jobs.

All of the manufacturing news in the state is not negative as several major businesses announced plans to begin operations in the Copper State. Helping offset the loss of Coleman Products, **DeRoyal Industries Inc.** of Knoxville, Tenn., will build a plant that will eventually employ 300 Nogales-area workers. DeRoyal Industries, which makes medical and surgical supplies, plans a three-phase expansion over the next five years, including the construction of a 40,000-square-foot sterilization plant, 200,000 square feet of manufacturing space, and warehousing and packaging buildings. ... **Digital**

Computer Corp. has bought a 176,000-square foot building in Tempe from GTE Corp. Digital plans to remodel the structure, located at 2010 W. 14th St., for manufacturing of rigid-media disks. The new plant is expected to employ 200 workers when it opens next fall. GTE no longer needed the building after disbanding its government group operations in Arizona. ... **Gentron Corp.**, which produces high reliability power hybrid circuits, will expand its Milwaukee, Wis., operation by adding a plant in Scottsdale that will employ approximately 100 people. ... A full-service custom injection molding and finishing business is building a plant in Casa Grande and expects to employ 250 workers within a year's time. **Mulay Plastics Inc.**, which has purchased a 100,000-square-foot building for its operations, also has plants at its home base of Addison, Ill, and in Holly Springs, Miss. ... The telemarketing and direct mail company of **Neutron Industries** plans to expand its headquarters at 7107 N. Black Canyon Highway in Phoenix after acquiring a 40,733-square-foot lot adjacent to its present facilities. The move is in anticipation of expansion of staff from 142 to 300 within the next two years. ... **Randell Manufacturing**, which makes restaurant equipment, will open a plant in Sierra Vista by the end of 1988. The Michigan-based company is expected to employ between 50 and 100 people in the near term, and eventually 300 workers, making Randell the largest private-sector employer in the city. ... **Burlington Coat Factory Warehouse Corp.**, which has 133 stores in 33 states, plans to open two retail outlets in Phoenix in 1989. Burlington stores, which average about 60,000 square feet and employ about 125 people, offer discounted women's, men's and children's clothing. ... A German bakery, **Black Forest Backerie Inc.**, plans to open in Phoenix by January. Sporting 80 varieties of breads, rolls, and pastries, the bakery expects to employ around 65 people at the bakery and one retail store.

MINING AND QUARRYING - **Magma Copper Co.** and **Newmont Mining Corp.** recently announced layoffs and transfers that will affect 300 employees. Magma is reducing its work force by 200 workers, or approximately 7 percent, at its San Manuel division. The layoff, which will decrease output from 44,000 tons to 40,000 tons of ore per day, affects hourly and salaried workers. Magma, which is also putting an underground development on hold to conserve capital, is spending $270 million to modernize and expand its San Manuel plant. Newmont plans to transfer or eliminate more than 100 positions in its Tucson geological-geophysical center in an effort to consolidate its operation in Denver. A 10-person office staff will remain in Tucson.

A copper mine seven miles west of Casa Grande is the site of a $19.5 million experimental program to mine copper using a process that does less environmental damage than open-pit mining. The process, called situ mining (Latin for "at the site" or "in place"), involves pumping acid down a well hundreds of feet in order to dissolve the ore, which is then pumped to the surface. The project, which is 75 percent federally funded, is a joint effort between the **U.S. Bureau of Mines** and two companies, **Asarco Inc.** of New York and **Freeport-McMoRan Gold Co.** of New Orleans.

CONSTRUCTION - The **Mesa City Council** approved plans for a $1 billion project, which will include 17 buildings ranging in size from four to 24 stories. The Fiesta Center, a 3.45 million-square-foot project, will be built on 60 acres at the southeast corner of Southern Avenue and Alma School Road. Officials hope the financial hub will give Phoenix a run for its money when the project is completed in 2015.

A $200 million commercial development, which will include a 24-story building, has received approval from the Avondale City Council. The mixed-use development, being planned by Recorp Partners Inc., will also have a convention hotel facility and retail shops. The project will be located at Interstate 10 and 99th Avenue.

An $80 million, 600,000-square-foot office project is being developed in Phoenix by The Koll Co. and the Kansas Public Employees Retirement System. Located at the northeast corner of 25th and Dunlap avenues -- adjacent to the Crescent Hotel -- the 22-acre development will be built in four phases and includes three 6-story office buildings and one 8-story building. Construction is set to begin in early 1989.

Construction has begun in Tempe on a $21 million Park Bridge office building. The 162,000-square-foot structure will be part of the Fountainhead Corporate Park, a 160-acre, $400 million office park, located at Interstate 10 and Broadway Road.

McKesson Corp. of San Francisco has purchased 150 acres on State Route 85 and Cotton Lane to build a 450,000-square-foot distribution facility. McKesson plans to relocate its current distribution center on 27th Avenue in Phoenix to the new building, located in the master-planned community of Estrella, when construction is completed in 1991.

Construction will begin in January on a 350,000-square-foot retail center at the northwest corner of Bell Road and the Black Canyon Freeway. This will be the first phase of a 62.4-acre development called **Bell Canyon Pavilions,** being planned by the Kobel Cos. The Phoenix shopping center will occupy half of the $80 million project, with the rest consisting of commercial, retail, and light industrial buildings.

Santa Fe Pacific Realty will kick off development of 435,000 square feet of industrial-office space in the first part of 1989. The subsidiary of Santa Fe Southern Pacific Corp. will begin with a $6 million, 250,000-square-foot warehouse building at The Papago, a 300-acre industrial park being developed by Santa Fe north of the Papago Freeway between 43rd and 51st avenues. Santa Fe will also start building in early '89 a 115,000-square-foot project consisting of office, retail, and light industrial space at West 10 Crossroads, a mixed-use development just north of The Papago. In addition, the realty company will begin construction on a $3.5 million, 170,000-square-foot distribution building in Tempe within the Broadway Industrial Park.

Several major office and industrial projects for the Phoenix metropolitan area were announced or got under way in the last two months. Simmons Co. and Estes Development Co. announced they will begin construction on the **Phoenix Compass Center** within two years. The $100 million complex, to be located just northeast of Sky Harbor International Airport, will consist of offices, retail shops, and a hotel. ... Construction has begun on phase one of **Madison Square,** a $100 million, 760,000-square-foot office and industrial development located inside the Southbank Business Park at Interstate 10 and University Drive. Being built by Madison Square Development of San Diego, the first part of the project will consist of six office and industrial structures ranging in size from 20,000 to 45,000 square feet. ... **Westcor Co.** is planning a $30-40 million development next to the Anasazi Golf Course in Paradise Valley. Plans call for the 320,000-square-foot project to consist of two 4-story office structures and a clubhouse/fitness center. ... Trammell Crow has begun construction on the **Forum**, a $35 million office building at 6263 N. Scottsdale Road. The three-story structure adjacent to the Scottsdale Hilton will feature exercise facilities and conference rooms.

TRANSPORTATION, COMMUNICATIONS and PUBLIC UTILITIES - **Salt River Project**, the Phoenix-based utility company, has agreed to pay $58 million to Kaiser Coal Co. to settle a dispute over a 25-year coal delivery contract. Kaiser had filed for reorganization under Chapter 11 in U.S. Bankruptcy Court more than two years ago.

TRADE - The home-improvement business has seen some changes in the Phoenix area in recent months. **HomeClub**, a wholesale chain out of San Diego, announced plans to open three stores in the Valley, where competition is already fierce. HomeClub, which charges a membership fee ($10-15), offers discounts of 15-40 percent compared to conventional home-center prices. The chain expects to employ 120 to 150 people per store. The state's oldest lumber and building supply company -- **O'Malley Cos.** -- meanwhile, announced plans to close two of its stores in metropolitan Phoenix.

A retail home furnishing company, **Home Express** of Hayward, Calif., is opening two stores in the Phoenix area in October. Each store, which targets higher-income individuals in the 25-45 age group, will occupy about 55,000 square feet and employ about 75 people.

In non-metropolitan areas there were two significant announcements recently concerning retail trade. On the negative side, **Phelps Dodge Mercantile Co.** will close a grocery and dry goods store in Douglas, and a furniture outlet in Bisbee. The shutdowns, due to weak local economies, will lay off 50 employees. On the positive side, **Wal-Mart Stores Inc.**, one of the most successful discount chains in the country, will open a 66,000-square-foot store in the Globe-Miami area. Wal-Mart expects to hire 125 workers.

Two shopping centers and a large retailer in the Phoenix area are scheduled for renovation and expansion projects. **Uptown Plaza**, at Central Avenue and Camelback Road, will receive $500,000 in improvements, which will include turning the northeastern corner into a minimall with room for 12 to 14 shops. **Camelback Village Square**, 7th Avenue and Camelback Road, will get $7.3 million of remodeling work. The project calls for a new grocery store, renovation of the facades of several buildings, and the addition of a "pod mall" (multitenant facility) at the site's southeastern corner. Finally, $11 million will be spent to renovate and expand **Goldwaters** at Fiesta Mall. Plans call for the existing 115,000 square feet of the department store to be remodeled, with construction of 35,000 square feet of additional retail space and a 250-car parking garage.

A Phoenix theater operation and a regional restaurant chain have announced ambitious expansion plans. **Harkins Theaters**, Arizona's oldest theater chain, plans a $12 million expansion that will add 73 screens by 1990 to the chain's current 15. The Scottsdale-based company expects to open six more theaters, including the state's largest complex, which will have 14 screens and the Bijou Cafe. On a larger scale, **Carl's Jr.**, which has 460 restaurants in four western states, will add 50 stores to its existing 30 in Arizona in the next five years. Forty stores will be added in the Phoenix area, and 10 in Tucson.

FINANCE, INSURANCE and REAL ESTATE - Several of the larger financial institutions operating in the state have laid off workers in recent months, a reflection of the economic problems of U.S. banks, and savings and loans. **First Interstate of Arizona** reportedly laid off 10 percent of its work force of 4,550, although company officials denied the number was that high. **Valley National Bank** reduced by 100 (300 for the year) to 6,600 the number of its employees. The state's largest financial institution said it plans to close between 30 and 50 branches in the next three years. Also, **Pima Savings** has let go 52 employees, mainly at its headquarters in Tucson. The reduction is about 5 percent of Pima's work force. And **Southwest Savings and Loan Association** cut 65 jobs in Pima and Maricopa counties earlier in the year.

The insurance sector in the state received good and bad news in the past few months. **Legacy Life Insurance Co.,** which operates in 26 states and has 3,100 agents, has moved its corporate headquarters to Phoenix. Legacy, which had $15 million in revenues in 1987, combined its Chicago and Omaha offices before relocating to Arizona. Legacy currently has 55 employees, but plans to hire and transfer additional staff. **Dun & Bradstreet Mountain States Plan Services,** meanwhile, closed a large part of its regional operations in Phoenix, forcing the layoff of 60 to 70 people. The company is moving its insurance-administration staff to Fresno, Calif., and Houston, but is keeping 10 to 12 employees in its marketing operation in Phoenix.

Del Webb Corp. plans to cut 231 employees (35 percent) from its work force by year end. More than half of the reduction will come from its corporate headquarters in Phoenix and the Sun City developments in the Phoenix and Tucson metropolitan areas. Webb posted a loss of $5 million in the first half of 1988, compared to a loss of $14.4 million during the same period in 1987.

Despite a slump in the state real estate market, announcements of new housing developments continue unabated. The 900-acre **Quiotosa Ranch RV Park Resort,** a $12 million project in Gila Bend, calls for 1,250 recreational vehicle spaces, an Old West town, restaurants, 18-hole golf course, and athletic and maintenance facilities. Already under construction is **Sun Village,** a 330-acre subdivision for retirees on Bell Road in Surprise. Four floor plans for single-family units are planned with prices ranging from $90,000 to $120,000.

Phoenix has been selected as the headquarters for **China International Trust and Investment Corp.** (CITIC) of Beijing, a $21 billion investment company wholly owned by the People's Republic of China. Arizona is expected to gain about $100 million in real estate transactions, according to Jack McDonnell, chief executive officer of Phoenix-based Ambanc Ltd. Ambanc formed a limited partnership with Able Mark, a subsidiary of CITIC, to purchase 142 acres at Goldfield Ranch, a 1,900-acre site in the McDowell Mountains, and the two are under contract to purchase other property in the Valley and out-of-state locations. Ambanc, which also has an office in Taiwan, spent five years courting the Chinese investors.

SERVICES and MISCELLANEOUS - **Samaritan Health Services,** Arizona's largest hospital employer, laid off 55 people and eliminated 122 positions in early September. The majority of the reduction, which affects less than 1 percent of its work force, will be at Samaritan's corporate offices in Phoenix.

Several companies announced in the past two months plans to construct hotels in the Phoenix area. But there was also some unsettling news for the Valley hotel industry. **Hilton Suites Inc.** said it will build a $20 million hotel at Central Avenue and Thomas Road in Phoenix. The hotel will have 225 suites and is expected to open in early 1990. ... **Ramada Inc.** will erect an eight-story, 210-room Ramada Inn at 44th and Van Buren streets in Phoenix. The hotel, expected to be completed in 1990, will be part of the 70-acre Phoenix Gateway Center. ... **Rodeway Inns International** will feature its new design concept -- stucco exterior and red-tile roof -- in a 100-room, two-story hotel, to be built at 1550 S. 52nd St. in Tempe. The hotel will be the first company-owned property built by Rodeway in seven years. Rodeway was acquired by Ramada in July. ... The **Thunderbird Resort at South Mountain,** a 169-acre, 500-room complex with an 18-hole golf course, is scheduled for completion in 1991. ... San Marcos Partnership I, general partner for the 296-room **Sheraton San Marcos Conference and Resort** in Chandler, filed for bankruptcy under Chapter 11. Kahler Corp., owners of 25 percent of the hotel, may try to buy out the Canadian partnership's interest. ... The **Hilton Pavilion Hotel** in Mesa, which previously filed for bankruptcy under Chapter 11, was sold at auction to the hotel's largest creditor, Mutual Life Insurance.

The Valley will be the site of **Nissan Motor Corp.**'s national training center for selling and servicing its luxury car, the Infiniti. The $5 million facility, being built at 6420 E. McDowell Road, will help train 2,000 dealership personnel in week-long sessions. **Lufthansa German Airlines**, meanwhile, will spend about $15 million to expand its training facilities at the Phoenix-Goodyear Municipal Airport. Lufthansa expects to create jobs for an additional 70 flight instructors and 30 mechanics in order to train 470 to 480 Lufthansa and other airline pilots a year. The German airline, which has been at Goodyear for 17 years, currently employs about 50 instructors at the facility.

GOVERNMENT - Construction can proceed on Maricopa County's **Southeast Regional Public Service Facility** in Mesa now that the design phase has been completed. The $17.5 million, 160,000-square-foot facility will have 16 courtrooms, 12 jury rooms, law library and cafeteria. Scheduled to be completed in 1990, the county complex will have local offices for the Board of Supervisors, Justice of the Peace, Treasurer, Adult Probation, and Facilities Management.

Approval has been given by the Arizona Board of Regents to build the **Goldwater Center for Science and Engineering** at Arizona State University. The $25 million center, which will be funded by a grant from the U.S. Department of Energy, will include research facilities for the College of Engineering and Applied Sciences, and the College of Liberal Arts and Sciences.

COURTS - Injuries that occur after normal working hours, if related to employment, are covered by workers' compensation benefits, the Arizona Supreme Court has decided. In ***Finnegan v. Industrial Commission,*** the high court ruled that an auto mechanic injured while helping repair a co-worker's automobile after their place of work had closed was eligible for benefits. The unanimous decision overturned rulings by the state Court of Appeals and an administrative law judge for the Industrial Commission of Arizona.

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C.I.S.
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2/9/89 A

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XII No. 11
November 1988

Unemployment Rate

Seasonally Adjusted
September*

ARIZONA	6.6%
Maricopa County	5.4%
Pima County	5.4%
UNITED STATES	5.4%

Consumer Price Index

U.S. - August 1988
Base = 1982-84

Wage Earner/Clerical Worker -	117.7
% Chg. Year Ago	3.9
All Urban -	119.0
% Chg. Year Ago	4.0

Phoenix - 2nd Qtr 1988
Base = 1982-84

All Urban -	119.9
% Chg. Year Ago	3.8

Tucson - 2nd Qtr 1988
Base = 1982-84

All Urban -	119.8
% Chg. Year Ago	0.9

*Preliminary

In the November Issue:

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LABOR MARKET INFORMATION
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005-6123
(602) 542-3871

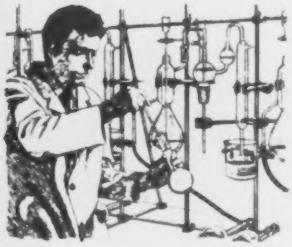
Brent Fine, Editor
Linda Van Calcar, Word Processor

Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Metropolitan Counties Benefit from State's Growing Industries

Fifty-five of Arizona's industries grew in employment in the first two-thirds of the 1980s, while four declined, according to a study by the Research Administration of the Arizona Department of Economic Security.

The annual study of nongovernmental and nonagricultural industries at the two-digit Standard Industrial Classification (SIC) level revealed several trends within the state's 15 counties. (See pages 3 and 4 for detailed information.) As expected, the diverse metropolitan counties contained the greatest number of growing industries; Maricopa County with 33, and Pima with 25. Among nonmetropolitan counties, Mohave had 17 growing industries, followed closely by Coconino and Yavapai, each with 16. Only Greenlee County had no industries with steady growth.



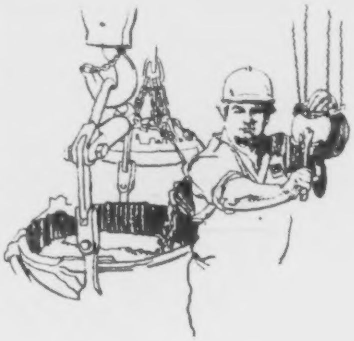
To perform the study, industry data in Unemployment Insurance (UI) files from mid-1980 through mid-1987 were examined. A seven-year period was chosen to help negate the effects of the business cycle. Since most employers are required to report their employment levels for UI purposes, this source of data is considered reliable. Because of a time lag in data availability, however, results were supplemented with information from various periodicals.

Service-producing industries clearly dominated the growing industry list with 37 increasing, compared to 18 industries rising in the goods-producing sector. Health services grew in the most counties (12), followed by business services in 10 counties.

Health-services employment continued to grow in Arizona as the population age rose and the demand for health care increased. Fast population growth due to in-migration also played a factor.

Among industries included in business services are temporary help, data processing, advertising, and janitorial services. These services play an important role in high-growth states such as Arizona.

Among declining industries, metal mining -- especially in copper -- had the poorest performance, but it improved in the last year. A decline of metal mining in five counties and a decrease in primary metals manufacturing (smelting) in two counties indicated a leveling off of employment losses in copper-producing areas. Last year's study revealed a decline of copper mining in eight counties and smelting in four counties.



Statewide, Pima County had the greatest number of declining industries with three: leather and leather products manufacturing, metal mining, and primary metals manufacturing.

Lists of occupations in growing and declining industries are available by writing to the address on the back of this newsletter or by calling (602) 542-3871.

--Barbara Keene

GROWING INDUSTRIES

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
Agricultural Services								x			x				x
Amusement and Recreation Services (Except Motion Pictures)								x	x		x	x			
Apparel and Accessory Stores								x				x			
Automotive Dealers and Gasoline Service Stations (Retail Trade)	x	x					x	x							x
Automotive Repair, Services, and Garages		x	x					x	x	x	x	x		x	
Banking									x	x				x	
Building Materials, Hardware, Garden Supply, and Mobile Home Dealers (Retail Trade)	x			x			x	x	x						
Business Services		x	x	x				x	x	x	x	x		x	x
Chemicals and Allied Products Manufacturing											x				
Communication							x								
Construction -- General Contractors							x							x	
Construction -- Special Trade Contractors		x	x						x			x		x	x
Eating and Drinking Places		x	x					x	x	x	x	x		x	
Educational Services								x							
Electrical and Electronic Machinery, Equipment, and Supplies (Manufacturing)		x									x		x		
Electric Gas, and Sanitary Services										x					x
Fabricated Metal Products Manufacturing											x				
Finance															x
Food and Kindred Products Manufacturing											x				
Food Stores			x					x		x	x	x			
Furniture and Fixtures Manufacturing											x				
Furniture, Home Furnishings, and Equipment Stores							x	x						x	
General Merchandise Stores			x		x		x	x				x			x
Health Services	x	x	x	x	x		x	x	x		x	x	x	x	
Holding and Other Investment Offices											x				
Hotels, Rooming Houses, Camps, and Other Lodging Places (Services)	x							x		x	x	x			
Insurance			x									x			x
Insurance Agents, Brokers, and Service									x		x				
Leather and Leather Products Manufacturing								x							
Legal Services			x					x	x		x			x	
Lumber and Wood Products (Except Furniture) Manufacturing								x	x					x	
Machinery (Except Electrical) Manufacturing															x
Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks Manufacturing			x								x				

GROWING INDUSTRIES (Cont.)

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
Miscellaneous Manufacturing								x	x						
Miscellaneous Retail Trade			x					x	x		x			x	x
Miscellaneous Services		x	x					x	x		x			x	
Motion Pictures								x			x				
Motor Freight Transportation and Warehousing		x						x		x	x				
Museums, Art Galleries, Botanical and Zoological Gardens (Services)								x							
Paper and Allied Products Manufacturing								x							x
Personal Services								x				x			
Primary Metals Manufacturing														x	
Printing, Publishing, and Allied Industries			x		x			x	x		x	x		x	
Private Households (Services)								x			x				
Real Estate	x														
Rubber and Miscellaneous Plastics Products Manufacturing								x							
Security and Commodity Brokers, Dealers, Exchanges, and Services											x				
Social Services		x						x			x				
Stone, Clay, Glass, and Concrete Products Manufacturing								x							x
Transportation by Air									x						
Transportation Equipment Manufacturing			x					x							
Transportation (Except Railroads)			x												
Transportation Services		x													
Wholesale Trade -- Durable Goods		x	x					x		x				x	
Wholesale Trade -- Nondurable Goods								x	x					x	

DECLINING INDUSTRIES

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
Apparel Manufacturing															x
Leather and Leather Products Manufacturing											x				
Metal Mining		x		x	x	x					x				
Primary Metals Manufacturing						x					x				

Reader Input Sought for Makeup of Industry Groups

The Department of Economic Security, Research Administration, is seeking input from *LMI Newsletter* readers on the makeup of industrial categories for Arizona's Nonagricultural, Wage and Salary Employment data. This information is published monthly in the newsletter under the heading, "Arizona Labor Force and Employment." (See pages 8-10.)

The published categories have remained the same for many years. But Research Administration believes it's time to review and consider revising some categories due to the recent updating of industrial classifications by the U.S Office of Management and Budget, and to more accurately reflect the major areas of the state's economy.

Data for Nonagricultural, Wage and Salary Employment are calculated in each state through the Current Employment Statistics (CES) program, sponsored by the U.S. Bureau of Labor Statistics (BLS). Each month, Research Administration, which runs Arizona's CES program, conducts a survey of employers to estimate employment by industry in each county. The county figures are then added to produce statewide totals.

The published Arizona CES data are based on groupings of Standard Industrial Classification (SIC) Manual categories. The SIC classification system breaks down each major U.S. industry into four levels: division (the highest), two-digit industry codes, three-digit industry codes, and four-digit industry codes. The more digits, the more detailed a classification within an industry.

Currently, Arizona publishes data for nonmetropolitan counties at basically the SIC division level, and primarily the two-digit level for metropolitan counties and the state as a whole.

The SIC Manual had a major revision in 1987 for the first time in 15 years. The changes were needed, according to the Office of Management and Budget, to reflect "technological changes, institutional changes such as deregulation in the banking, communications, and transportation industries; and the tremendous expansion in the service sector. ..." (See December 1986 *LMI Newsletter* for additional information on the SIC changes.) The SIC changes will be incorporated into the CES program in January 1990.

Although the SIC revision will not affect most of the published CES data in Arizona, the changes may cause a break in series within some industrial categories. Any time there is a coding change or other major change in categories, there is a loss of historical continuity, which can have an impact on many organizations and individuals. In addition, there would be some impact on this office in terms of CES sample selection and, possibly, sample size.

Some of the current industrial groupings published may no longer be significant, while other industrial categories may have become more prominent. Some examples of possible changes in CES data in the *LMI Newsletter* are:

- Divide Machinery into two subgroups: "Electrical Machinery" and "Nonelectrical Machinery."
- Under Services and Miscellaneous, break out "Temporary Employment Services" from "Business Services."
- Under Government, divide "State and Local" into two separate categories.

- Under Manufacturing, combine "Apparel" with "All Other Nondurable Goods."

- Under Mining and Quarrying, combine "Copper Mining" with "Other Mining and Quarrying."

The BLS needs to know of changes to 1990 data publication categories as soon as possible. If you have any suggestions concerning the publication of employment data by industry, please call (602) 542-3871, or send any suggestions to the address on the back of this newsletter.

--Vic Conti

Occupation Handbook Provides Glimpse at Job Market Future

Researching a future occupation? Planning to change careers? Unsure of qualifications for a job? Answers to these questions -- and much more -- can be found in the 1988-89 edition of the *Occupational Outlook Handbook*.

Published for more than 40 years by the U.S. Department of Labor's Bureau of Labor Statistics (BLS), the 18th edition focuses on the job outlook through the year 2000. Among the highlights are: in-depth profiles of 250 occupations, including current and future job and earnings potential; easy-to-read graphs and tables illustrating the handbook's major points; and an appendix that gives employment information on 125 other occupations, tells how the handbook's projections were made, and provides sources for state and local job-outlook data.

In addition, two other chapters give supporting information. "Where To Go for More Information" tells where other sources of information are located, and offers tips on interviewing and writing a resume. And an introductory chapter helps readers get around the handbook's 458 pages and explains the format used in analyzing occupations.

The heart of the BLS guide, however, -- nearly 400 pages -- is the job profiles. From architects to zoologists, the handbook breaks down individual occupations by focusing on several primary areas: type of work and conditions, required training and qualifications, current and future employment outlook, earnings potential, related occupations, and sources of additional information.

The *Occupational Outlook Handbook* is available in soft cover ($22) and hard cover ($24) by sending checks or money orders, made payable to the Superintendent of Documents, to one or the following addresses: Superintendent of Documents, U.S. Government Printing Office, Washington D.C. 20402; or BLS Publications Sales Center, P.O. Box 2145, Chicago, Ill. 60690. Those ordering directly from the Superintendent of Documents may also use VISA or Master Card. (Include card number and expiration date.)

The Arizona Labor Force in September

After substantial increases in the unemployment rate during July and August, the economy stabilized in September. Led nearly exclusively by the return of students for the fall semester, Arizona's unemployment rate eased in September to 6.6 percent, one-tenth of a percentage point below the previous month's rate.

Although the number of unemployed declined, it was only slightly greater than what is usually expected this time of the year. Job growth in September, however, was consistent with seasonal changes and the trends that have been experienced throughout 1988.

Manufacturing and Construction continued to experience economic weakness while Retail Trade and the school systems added a significant number of jobs. But unfortunately, the underlying trend of the economy remains generally flat with insufficient job creation to meet the growing population of the state.

In Manufacturing, employment for September rose by 400 as losses in durable goods sectors were more than offset by seasonal gains in nondurable sectors. The closely watched high-technology industries of aerospace and electronics showed no change in employment in September and are up about 600 jobs compared to a year ago.

This lackluster employment growth bodes poorly for the future. While the national economy has recently experienced a resurgence due to improvement in Manufacturing, Arizona has not shared in that prosperity. And unless recent trends are reversed, Manufacturing will continue to experience slow job creation.

Beginning in April and continuing through the summer, Construction enjoyed a steady expansion. During that period, 2,800 jobs were added. But, as expected, September recorded the first losses as seasonal projects were completed and employers reduced their work forces.

A total of 700 jobs in Construction were lost in September with nearly all of the reductions recorded in the Phoenix and Tucson metropolitan areas. Cooler weather in the northern counties and high vacancy rates in the metropolitan areas point to continuing drops in Construction employment in the coming months. As we look ahead to 1989 and 1990, little change is expected.

While September is too early for the state to receive significant benefits from the tourism industry, it is a time when the opening of school for the fall semester generates substantial business in Retail Trade. This year was no exception to that trend as department stores and related businesses saw an increase in employment. Added to that growth was the rise of jobs in restaurants on and off campus.

Retail Trade employment expanded by 1,600 jobs in September while Services added an additional 200 workers. In the months ahead the staffing of new resorts and the arrival of winter tourists will be a much needed source of job creation.

As usual in September, the beginning of the new semester accounted for nearly all of the recorded job creation in Arizona. Schools produced 27,000 jobs and were responsible for nearly all of the net gain in August of 25,500 jobs. Most of these positions were the return of faculty and staff who are not contracted for a full year, and students involved in work-study programs.

For more than a year, Arizona has experienced a substantially weakened economy. But there is no reason for panic. While a good case could be made that the real estate industry is in a recession, such is not the case for the economy in general.

Unless there is a recession nationally or the problems in real estate invade the rest of the economy, Arizona can expect to see slow, but positive, job growth in the months ahead. And our rising unemployment rate will begin to slow as people who anticipate moving to the state recognize our lack of job creation.

--Dan Anderson

Arizona Labor Force and Employment

September 1988 (in thousands)

	Arizona				
				Amount Change	
	Sep.* 1988	Aug. 1988	Sep. 1987	Aug.- Sept.	1987- 1988
TOTAL CIVILIAN LABOR FORCE**	1671.5	1634.5	1607.8	+37.0	+63.7
Total Unemployment	109.6	113.6	94.5	-4.0	+15.1
Rate	6.6	7.0	5.9	----	----
Rate (Sea. Adj.)***	6.6	6.7	5.9	----	----
Total Employment	1561.9	1520.9	1513.3	+41.0	+48.6

The Above Labor Force Statistics Should No

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Sep.* 1988	Aug. 1988	Sep. 1987	Aug.- Sept.	1987- 1988
TOTAL WAGE AND SALARY	1405.4	1379.9	1390.2	+25.5	+15.2
Manufacturing	189.7	189.3	188.4	+0.4	+1.3
Durable Goods	146.0	146.3	146.0	-0.3	+0.0
Stone, Clay, and Glass	7.3	7.3	8.0	+0.0	-0.7
Primary and Fabricated Metals	16.0	16.0	16.1	+0.0	-0.1
Primary Metals	7.3	7.3	7.3	+0.0	+0.0
Fabricated Metals	8.7	8.7	8.8	+0.0	-0.1
Machinery	65.7	65.7	64.5	+0.0	+1.2
Other Durable Goods	57.0	57.3	57.4	-0.3	-0.4
Aircraft and Missiles	26.3	26.3	26.9	+0.0	-0.6
Lumber and Wood Product (Excluding Furniture)	8.7	8.7	8.5	+0.0	+0.2
All Other Durable Goods	22.0	22.3	22.0	-0.3	+0.0
Nondurable Goods	43.7	43.0	42.4	+0.7	+1.3
Food and Kindred Products	9.6	9.4	9.3	+0.2	+0.3
Apparel	4.6	4.6	4.7	+0.0	-0.1
Printing and Publishing	16.2	16.3	16.2	-0.1	+0.0
All Other Nondurable Goods	13.3	12.7	12.2	+0.6	+1.1
Mining and Quarrying	12.3	12.3	11.6	+0.0	+0.7
Copper Mining	9.2	9.2	8.6	+0.0	+0.6
Other Mining and Quarrying	3.1	3.1	3.0	+0.0	+0.1
Construction	96.0	96.7	102.4	-0.7	-6.4
Trans., Communications, & Public Utilities	72.7	72.8	73.0	-0.1	-0.3
Transportation	36.7	36.7	36.5	+0.0	+0.2
Communications and Public Utilities	36.0	36.1	36.5	-0.1	-0.5
Trade	342.9	341.3	337.8	+1.6	+5.1
Wholesale Trade	68.0	68.0	68.2	+0.0	-0.2
Retail Trade	274.9	273.3	269.6	+1.6	+5.3
General Merchandise and Apparel	41.9	41.7	43.0	+0.2	-1.1
Food Stores	45.7	45.2	43.0	+0.5	+2.7
Automotive and Service Stations	33.3	33.5	32.5	-0.2	+0.8
Eating and Drinking Places	98.2	97.4	95.3	+0.8	+2.9
Other Retail Trade	55.8	55.5	55.8	+0.3	+0.0
Finance, Insurance, and Real Estate	91.6	92.1	95.2	-0.5	-3.6
Services and Miscellaneous	355.8	355.6	345.5	+0.2	+10.3
Hotels and Other Lodging Places	39.0	38.3	35.9	+0.7	+3.1
Business Services	76.5	76.8	76.2	-0.3	+0.3
Health Services	91.1	91.0	87.0	+0.1	+4.1
Other Services	149.2	149.5	146.4	-0.3	+2.8
Government	244.4	219.8	236.3	+24.6	+8.1
Federal	43.5	43.4	43.5	+0.1	+0.0
State and Local	200.9	176.4	192.8	+24.5	+8.1
School	114.2	87.2	111.0	+27.0	+3.2

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

September 1988 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
Sep.* 1988	Aug. 1988	Sep. 1987	Aug.- Sep.	1987- 1988	Sep.* 1988	Aug. 1988	Sep. 1987	Aug.- Sep.	1987- 1988
1035.1	1014.8	998.7	+20.3	+36.4	317.5	308.6	304.5	+8.9	+13.0
55.6	54.8	48.7	+0.8	+6.9	16.8	16.5	14.5	+0.3	+2.3
5.4	5.4	4.9	----	----	5.3	5.3	4.8	----	----
5.4	5.3	4.9	----	----	5.4	5.3	4.8	----	----
979.5	960.0	950.0	+19.5	+29.5	300.7	292.1	290.0	+8.6	+10.7

Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

MARICOPA Sep.* 1988	Aug. 1988	Sep. 1987	Aug.- Sep.	1987- 1988	PIMA Sep.* 1988	Aug. 1988	Sep. 1987	Aug.- Sep.	1987- 1988
924.8	912.0	915.7	+12.8	+9.1	247.2	241.1	243.2	+6.1	+4.0
138.6	138.2	136.5	+0.4	+2.1	30.1	30.2	31.1	-0.1	-1.0
107.8	107.9	106.8	-0.1	+1.0	24.3	24.5	25.5	-0.2	-1.2
4.8	4.8	5.3	+0.0	-0.5					
10.9	11.0	10.8	-0.1	+0.1					
52.1	52.0	51.3	+0.1	+0.8					
40.0	40.1	39.4	-0.1	+0.6					
30.8	30.3	29.7	+0.5	+1.1	5.8	5.7	5.6	+0.1	+0.2
6.3	6.2	6.1	+0.1	+0.2					
3.6	3.6	3.4	+0.0	+0.2					
11.3	11.4	11.5	-0.1	-0.2					
9.6	9.1	8.7	+0.5	+0.9					
0.6	0.6	0.6	+0.0	+0.0	1.8	1.8	1.6	+0.0	+0.2
64.2	64.7	68.8	-0.5	-4.6	18.5	18.6	19.4	-0.1	-0.9
50.2	50.3	50.1	-0.1	+0.1	9.5	9.4	9.5	+0.1	+0.0
26.7	26.8	26.3	-0.1	+0.4	4.6	4.6	4.7	+0.0	-0.1
23.5	23.5	23.8	+0.0	-0.3	4.9	4.8	4.8	+0.1	+0.1
231.5	230.4	229.4	+1.1	+2.1	57.0	56.8	55.0	+0.2	+2.0
53.9	54.0	54.2	-0.1	-0.3	8.2	8.3	7.8	-0.1	+0.4
177.6	176.4	175.2	+1.2	+2.4	48.8	48.5	47.2	+0.3	+1.6
26.8	26.6	28.0	+0.2	-1.2	7.1	7.2	7.4	-0.1	-0.3
29.3	28.8	27.6	+0.5	+1.7	7.8	7.7	7.1	+0.1	+0.7
20.6	20.8	20.1	-0.2	+0.5	5.8	5.8	5.4	+0.0	+0.4
63.0	62.5	61.0	+0.5	+2.0	18.1	17.9	17.5	+0.2	+0.6
37.9	37.7	38.5	+0.2	-0.6	10.0	9.9	9.8	+0.1	+0.2
72.9	73.3	75.4	-0.4	-2.5	12.1	12.2	12.7	-0.1	-0.6
240.3	239.8	232.6	+0.5	+7.7	66.0	66.0	64.3	+0.0	+1.7
22.4	21.7	19.9	+0.7	+2.5	6.2	6.1	6.4	+0.1	-0.2
61.0	61.3	61.2	-0.3	-0.2	11.0	11.1	10.7	-0.1	+0.3
60.1	60.0	57.2	+0.1	+2.9	19.3	19.4	18.4	-0.1	+0.9
96.8	96.8	94.3	+0.0	+2.5	29.5	29.4	28.8	+0.1	+0.7
126.5	114.7	122.3	+11.8	+4.2	52.2	46.1	49.6	+6.1	+2.6

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
September 1988

	Apache	Cochise	Coco-nino	Gila	Graham	Green-lee	La Paz
CIVILIAN LABOR FORCE*	15,550	35,750	43,500	13,100	9,000	3,100	5,150
Total Unemployment	2,250	2,875	3,350	1,475	900	300	525
Rate	14.5%	8.0%	7.7%	11.3%	10.0%	9.7%	10.2%
Rate (Seas. Adj.)**	16.0%	8.5%	8.6%	11.9%	10.1%	9.9%	9.5%
Total Employment	13,300	32,875	40,150	11,625	8,100	2,800	4,625

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	15,550	25,000	39,175	10,825	5,450	2,925	3,325
Manufacturing	825	1,375	2,850	1,300	225	75	300
Mining & Quarrying	50	100	175	1,325	0	1,600	50
Construction	1,050	1,150	1,725	625	225	200	175
T.C.P.U.	1,900	1,600	2,450	375	150	50	75
Trade	1,575	5,300	9,175	2,425	1,600	225	1,075
F.I.R.E.	325	675	775	275	100	25	100
Services & Misc.	4,525	4,500	10,425	1,875	925	125	775
Government	5,300	10,300	11,600	2,625	2,225	625	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	31,850	26,850	37,450	10,525	37,400	49,600
Total Unemployment	2,200	2,925	3,525	2,000	2,100	12,700
Rate	6.9%	10.9%	9.4%	19.0%	5.6%	25.6%
Rate (Seas. Adj.)**	7.1%	12.2%	9.4%	16.8%	5.8%	22.8%
Total Employment	29,650	23,925	33,925	8,525	35,300	36,900

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	22,025	20,350	29,350	8,875	25,100	25,475
Manufacturing	3,050	1,900	3,775	1,325	2,325	1,725
Mining & Quarrying	325	1,200	3,950	0	950	100
Construction	1,700	1,175	1,400	300	2,200	1,450
T.C.P.U.	1,225	1,825	900	500	850	1,100
Trade	6,275	4,125	5,150	3,400	6,650	7,425
F.I.R.E.	950	375	775	375	1,000	875
Services & Misc.	4,875	4,700	4,000	1,375	5,550	5,850
Government	3,625	5,050	9,400	1,600	5,575	6,950

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Sep.* 1988	Aug. 1988	Sep. 1987	Sep.* 1988	Aug. 1988	Sep. 1987	Sep.* 1988	Aug. 1988	Sep. 1987
Manufacturing	410.41	406.14	401.60	41.0	40.9	40.2	10.01	9.93	9.99
Aircraft & Missiles	INA	INA	529.94	INA	INA	42.6	INA	INA	12.44
Food & Kindred Prod.	333.37	334.80	403.52	38.9	40.0	42.7	8.57	8.37	9.45
Primary Metals	525.76	492.54	472.55	39.8	38.6	36.1	13.21	12.76	13.09
Machinery	417.77	415.95	388.44	40.6	40.9	39.0	10.29	10.17	9.96
Copper Mining	514.14	507.98	503.66	41.0	40.9	40.1	12.54	12.42	12.56
Construction	425.96	426.82	406.56	36.5	36.7	35.2	11.67	11.63	11.55
Utilities	643.68	650.25	577.60	43.2	42.5	40.0	14.90	15.30	14.44
Retail Trade**	250.24	248.16	256.79	33.1	33.4	33.7	7.56	7.43	7.62
Wholesale Trade	386.89	398.34	386.31	39.6	40.4	39.1	9.77	9.86	9.88

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Sep.* 1988	Aug. 1988	Sep. 1987	Sep.* 1988	Aug. 1988	Sep. 1987	Sep.* 1988	Aug. 1988	Sep. 1987
Manufacturing	446.68	433.88	434.02	42.5	41.8	41.1	10.51	10.38	10.56
Construction	442.38	445.38	416.75	36.5	36.9	34.7	12.12	12.07	12.01
Retail Trade**	274.70	273.14	279.14	33.5	34.1	34.0	8.20	8.01	8.21
Wholesale Trade	413.29	425.80	388.32	40.4	41.1	38.6	10.23	10.36	10.06

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Sep.* 1988	Aug. 1988	Sep. 1987	Sep.* 1988	Aug. 1988	Sep. 1987	Sep.* 1988	Aug. 1988	Sep. 1987
Manufacturing	384.07	378.74	353.73	39.8	39.7	38.2	9.65	9.54	9.26
Copper Mining	591.16	598.88	526.26	42.9	42.9	41.8	13.78	13.96	12.59
Construction	384.73	381.55	360.63	37.1	36.9	35.6	10.37	10.34	10.13
Utilities	582.36	597.82	554.60	42.2	42.1	40.9	13.80	14.20	13.56

* Preliminary

** Excludes eating and drinking places

NOTE: These estimates are based on a sample of full-time and part-time production and related employees whose payroll and hours are reported for the pay period that includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
September 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,671,451	1,561,901	109,550	6.6%
Apache	15,543	13,301	2,242	14.4
Cochise	35,752	32,870	2,882	8.1
Coconino	43,493	40,145	3,348	7.7
Gila	13,096	11,623	1,473	11.2
Graham	8,991	8,093	898	10.0
Greenlee	3,095	2,790	305	9.9
La Paz	5,145	4,618	527	10.2
Maricopa	1,035,129	979,502	55,627	5.4
Mohave	31,857	29,656	2,201	6.9
Navajo	26,837	23,919	2,918	10.9
Pima	317,519	300,714	16,805	5.3
Pinal	37,454	33,921	3,533	9.4
Santa Cruz	10,522	8,531	1,991	18.9
Yavapai	37,407	35,308	2,099	5.6
Yuma	49,611	36,909	12,702	25.6

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported from these sources.

MANUFACTURING - **Garrett Turbine Engine Co.** and **Hughes Aircraft Co.** were awarded in October nearly $10 billion in defense-related contracts. Garrett, which employs about 4,000 people at its Phoenix plant, will produce 5,000 engines, worth about $2 billion, for the Army's new light-attack and reconnaissance (LHX) helicopters. Garrett is expected to hire an additional 300 employees at its Phoenix and Indianapolis plants when it begins production of the T800 engine in the mid-1990s. Tucson, meanwhile, will benefit from a $7.5 billion contract Hughes won to manufacture 24,000 Advanced Medium-Range Air-to-Air Missiles (AMRAAM) during the next 10 years. From 800 to 1,000 production personnel are expected to be hired to build the **AMRAAM**, which is designed to counter the newest generation of Soviet fighters and bombers.

GenRad Inc. announced it will be closing its Small Systems Test Operations at 14841 N. Black Canyon Highway in Phoenix, costing around 100 employees their positions. The Phoenix operation, which makes integrated software systems and automatic test equipment, will be consolidated with GenRad's printed circuit board test systems in Concord, Mass.

Seventy-nine employees of *The Arizona Republic* and *Phoenix Gazette* have voluntarily retired. The parent company of the two newspapers, **Phoenix Newspapers Inc.**, which employs about 2,500 people, announced in early October it planned to eliminate 100 non-union positions through an early-retirement program and layoffs. The fate of 21 other positions in the news, advertising, circulation and business departments has not been decided.

A leading maker of generic drugs, Phoenix-based **Steris Laboratories Inc.**, opened a 125,000-square-foot plant in Phoenix in early November. The facility at 620 N. 51st Ave. employs 360 people, including microbiologists, chemists, engineers, set-up mechanics, computer specialists and production workers.

International Business Machines says that half of its 2 million-square-foot plant in Tucson will be turned into a business park. IBM announced in July it will end its manufacturing operations at the Rita Road facility by December 1989, eliminating 2,800 positions. About 2,200 people working at the General Products Laboratory and in marketing and service positions around Tucson are not affected by the cutbacks. Between five and seven of 11 buildings affected by the shutdown will be available for leasing.

CONSTRUCTION - Housing starts by the 10 largest home builders in Phoenix declined 20 percent in the first three-quarters of the year. A total of 11,168 homes were started in the first nine months of 1988, compared to 13,390 for the same period a year ago. Only Continental Homes and Richmond American Homes started more houses than in the previous period last year. The number of active builders in the Valley has dropped from 495 in 1987 to 275 in 1988.

Kraft Inc. of Glenview, Ill., plans to build a $6.5 million office/warehouse at 47th Avenue and Buckeye Road in Phoenix. The 175,000-square-foot project, which will take seven months to finish, will include 15,000 square feet of office space and 82,000 square feet of cooler and freezer space. The multinational food products company was recently bought by Philip Morris Cos. Inc. for $11 billion.

Construction is set to begin at year's end for an upscale warehouse project for small businesses and artisans in Mesa. Tempe developer **J.L. Springer Inc.** plans to use split-face brick and Georgia marble in building the $8 million, 200,000-square-foot project on First Avenue, one block east of Dobson Road. The facility will have 145 units and feature 25-foot-high ceilings.

SunCor Development Co., a subsidiary of Pinnacle West Capital Corp., will build a 450,000-square-foot shopping center in Tempe in early 1989. Price Club, a discount, member-only retail store, will anchor the 38-acre project at Elliot Road and Priest Drive.

TRANSPORTATION, COMMUNICATIONS and PUBLIC UTILITIES - While certain areas of the state's economy are depressed, aviation appears to be flying high. Work has begun on **Terminal 4 of Sky Harbor International Airport** in Phoenix, which is designed to accommodate 30 million passengers a year. America West Airlines will be the primary tenant of the $170 million, six-story terminal, scheduled to open in October 1990. Also, the FAA cleared a path for the building of a 7,500-foot runway at the **Bullhead/Laughlin Airport**, which will open the way for jet service. The FAA said the runway would not severely affect the area's environmental quality. Besides the runway, $14 million in federal grants are being sought for a taxiway and associated equipment.

A proposed merger between **Tucson Electric Power Co.** and San Diego Gas & Electric Co. ended when the two utilities were unable to reach agreement on a plan to block efforts of a hostile-takeover of San Diego Gas by Southern California Edison Corp. Tucson Electric, third-largest utility in Arizona, is expected to receive a $25 million penalty payment from San Diego Gas if the buy-out bid by Southern California Edison is successful. Southern California Edison launched a $2.2 billion hostile-takeover bid for San Diego Gas in October.

Pinnacle West Capital Corp. recently announced a 30 percent drop in net income for the period ending Sept. 30, compared to the same period in 1987. Pinnacle West is a holding company for MeraBank, Arizona's largest thrift; Arizona Public Service Co., the state's largest utility; SunCor Development Co., one of the Valley's largest property owners; Malapai Resources Co., a uranium mining company; and El Dorado Investment Co., a venture capital company. A poor Valley commercial and residential real estate market was cited for the revenue drop by Pinnacle West.

The only independent television station owned by a Roman Catholic diocese in the United States closed November 1. **KDTU-TV (Channel 18)**, owned by the Roman Catholic Diocese of Tucson, laid off 40 full- and two part-time employees when it shut down operation due to the diocese's financial problems. The diocese, which has about 260,000 members in nine counties, had laid off 32 employees in the past year.

The Valley's oldest radio station, **KOY (550-AM)**, laid off 12 air staff when it recently changed from a news-talk to a nostalgic-music format. In a cost-cutting move expected to save $500,000, KOY let go its seven-person news staff and five talk-show hosts. The station's programming is being picked up over satellite, eliminating the need for local disc jockeys. KOY's sister station, KOY-FM, will continue its top-40 format, says Gary Edens, chairman of Edens Broadcasting, which owns both stations.

TRADE - Plans for construction of two Valley shopping centers and expansion of **Tucson Mall** were recently announced. **Scottsdale Pavilions**, a $40 million development at the northeastern corner of Indian Bend and Pima roads (on the Salt River Pima-Maricopa Indian Community), will feature more than 100 shops on 80 acres. Major tenants for the Estes Co. project -- which will have 25-foot waterfalls, five acres of lakes and 400 palm trees -- include Target, Home Depot, Ross, Miller's Outpost, and Cost Plus. In the far East Valley, **The Alameda Center at Superstition Springs** will have 310,000 square feet of retail space. A Target store will cover nearly half of the development's space. Groundbreaking for the retail center, being built by Wessex Cos. at Power Road and East Hampton Avenue, is scheduled for late 1989 or early 1990. Finally, the first new Goldwaters department store in eight years will highlight the $30 million, 325,000-square-foot expansion of Tucson Mall. The two-story, 135,000-square-foot Goldwaters will take up the major portion of an east wing, which will also feature 90,000 square feet for specialty shops. Current tenant Dillard's will add 75,000 square feet to its store on the mall's north wing.

Two retail chains in the West have recently made their debut in Arizona. World Cycle Corp. of Dallas, which has 65 stores in five states, has opened 10 **World Cycle and Spoke Shop** outlets, six in the Valley and four in Tucson. The shops, which average 1,800 square feet, are geared toward adult bikers. **Savers,** a 32,800-square-foot department store, has opened at 2625 W. Bethany Home Road in Phoenix. Operated by TVI of Bellevue, Wash., Savers features the usual department store fare and offers more than 100,000 one-of-a-kind items, Savers President Tom Ellison says. Savers, which plans to open another Valley store by the end of 1989, has 40 stores in seven states and Canada.

FINANCE, INSURANCE and REAL ESTATE - The state Department of Insurance reports 2,494 insurance and service organization companies -- up from 2,397 -- were operating in Arizona in 1987. Included in the total were 120 domestic and 807 out-of-state life and disability insurers, 672 domestic life and disability reinsurance companies, and 30 domestic and 691 out-of-state property and casualty insurance companies.

Japanese investment in the Valley has fallen dramatically this year. According to a report by the accounting firm of Kenneth Leventhal & Co. of Los Angeles, Japanese firms have invested $40 million in the area in 1988, compared to $1.59 billion from 1985 to 1987.

SERVICES and MISCELLANEOUS - A new $800,000 visitor center at the **Boyce Thompson Southwestern Arboretum** in Superior opened in October. The center is the first phase of a building plan that includes a greenhouse and auditorium. The center has an orientation room, bookstore, gift shop, offices, and plant nursery.

The first phase of the 22.5-acre Camelback Esplanade -- the **Ritz-Carlton Hotel** -- opened recently at 2401 E. Camelback Road. The hotel offers 301 guest rooms and two dining rooms.

GOVERNMENT - The Arizona Legislature's **Joint Committee on Capital Review** has approved $86 million in construction projects. Among the projects OK'd were a $28 million Supreme Court building in Phoenix, a $26 million Department of Economic Security building in Phoenix, and a $15.6 million general state office building in Tucson.

Voters in **Gilbert** said yes in October to issuing $91.5 million in bonds to finance a new municipal complex, water and sewer improvements, parks and recreational facilities, street improvements, and new fire stations and fire equipment. The $24.3 million municipal complex will feature a council chamber, public-safety building and library.

GENERAL - Twenty-five companies are on the annual **Arizona 100** list for the first time, eight of which are in the construction business. The list of privately held companies is compiled by the accounting firm of Arthur Andersen & Co. and is based on revenues for fiscal year 1987. The top 10 businesses all had revenues of more than $100 million. They include: Shamrock Foods Co., Bar-S Foods Co., Gosnell Builders, Sundt Corp., Kaibab Industries, Kitchell Corp., United Dairymen of Arizona, Sun Land Beer Co., and Empire Southwest Co. The annual list has an average turnover rate of 25 percent, Arthur Andersen says.

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XII No. 12
December 1988

Unemployment Rate

Seasonally Adjusted
October*

ARIZONA	7.0%
Maricopa County	5.8%
Pima County	5.7%
UNITED STATES	5.3%

Consumer Price Index

U.S. - September 1988
Base = 1982-84

Wage Earner/Clerical Worker	118.5
% Chg. Year Ago	4.1
All Urban	119.8
% Chg. Year Ago	4.2

Phoenix - 3rd Qtr 1988
Base = 1982-84

All Urban	120.9
% Chg. Year Ago	4.1

Tucson - 3rd Qtr 1988
Base = 1982-84

All Urban	121.8
% Chg. Year Ago	2.0

*Preliminary

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LABOR MARKET INFORMATION
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005-6123
(602) 542-3871

Brent Fine, Editor
Linda Van Calcar, Word Processor

Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

OIS Report Fills Information Gap With Self-Employment Data

Employment forecasts have long been criticized for not including the self-employed. Vocational educators, job trainers and career planners are at a disadvantage when the outlook for self-employed jobs is left out of occupation reports.

At last in Arizona there is relief from this problem. Using 1980 Census data, the microcomputer Occupational Information System (OIS) of Arizona, sponsored by the Arizona State Occupational Information Coordinating Committee (ASOICC), has added information on the self-employed in its latest report, "Year 2000 Employment Projections -- State of Arizona -- With Estimates of Self-Employment."

Certainly it makes sense to consider self-employment as an option for job training, or for all or part of one's life work. Few wage-and-salary jobs offer the same degree of independence that self-employment can offer. Few are more demanding of self-discipline, high skill, entrepreneurial ability, and dedicated action. In fact, entrepreneurial ability is probably as important to the success of the self-employed as the specific job skill.

One positive aspect of self-employed occupations -- from a job-training and vocational education point of view -- is that they can lead to employment of others. For example, a self-employed barber may open a shop in a growing area, find demand for his service to be greater than he alone can supply and hire another barber to take on the surplus.

(Continued on Page 3)

2000 Job Forecast Covers 750 Occupations

Arizona employers, educators and future job seekers are some of the groups that should benefit from a report on projected wage-and-salary employment and self-employment in the state in the year 2,000.

Appropriately titled, "Year 2000 Employment Projections -- State of Arizona -- With Estimates of Self-Employment," the study includes employment estimates for 750 occupations. Agricultural employment, however, was excluded from the report, issued in October by the Occupational Information System (OIS) of Arizona, a project of the Arizona State Occupational Information Coordinating Committee (ASOICC).

The OIS report projected occupational employment for the year 2000 by calculating annual compounded growth for each occupation during a 1988-1993 period, then extending the data to the year 2000. (The 1988-1993 projections had been previously derived from the Occupational Employment Statistics (OES) program.) The growth rates were then benchmarked to a total employment figure provided by an econometric model. The self-employment data are based on 1980 U.S. Census figures.

The report is broken into three parts, in order to present the data in three forms -- in OES code sequence, alphabetically, and by the number of employed in an occupation (largest to smallest). Among data in each section are wage-and-salary employment and self-employment estimates for the years 1988, 1989 and 2000, plus expected job growth and opportunities in each occupation.

To obtain a free copy of the report, call 542-3871, or write to the address on the back of the newsletter requesting OIS Report 88-9.

TABLE 1

OES OCCUPATIONAL TITLE	Wage-and-Salary Employment & Self-Employment		Self-Emp. As Percent Of Total Emp.*	Self-Employeemnt	
	1988	2000		1988	2000
All Other Health Diagnosing and Treating Practitioners	167	262	44.9	75	117
Podiatrists	86	131	43.0	37	56
Dentists	2195	3350	42.9	941	1436
Optometrists	517	792	42.9	222	340
Veterinarians and Veterinary Inspectors	27	33	37.0	10	12
Barbers	653	1115	35.7	233	398
Lawyers	8113	13407	32.9	2666	4406
Shoe & Leather Workers & Repairers	113	189	32.7	37	62
Physicians and Surgeons	7950	11895	32.1	2550	3816
Artists and Commercial Artists	1658	2812	31.9	529	897
Architects (Exc. Landscape and Marine)	1829	3178	31.4	575	999
Landscape Architects	128	213	31.3	40	67
Funeral Directors and Morticians	265	455	29.1	77	132
Precision Patternmakers, Model Makers, Layout Work	56	82	28.6	16	23
Camera Operators, Television & Motion Picture	113	173	28.3	32	49
Jewelers and Silversmiths	505	885	28.3	143	251
Photographers	864	1449	27.8	240	402
Hand Workers, Jewelery and Related Prod.	72	108	27.8	20	30
Locksmiths and Safe Repairers	259	459	26.6	69	122
Stenographers	1231	1835	25.8	318	474
Musicians (Instrumental)	1487	2618	25.6	380	669
1st Line Supervisors and Manager/ Supervisors, Sales	23248	38103	25.3	5878	9634
Camera and Photographic Equip. Repairers	64	98	25.0	16	24
Musical Instrument Repairers and Tuners	64	113	25.0	16	28

* Self-employment percentage is based on 1980 Census figures.

Self-Employed Compared to Total Employment

Occupations with a higher probability for self-employment are those with a high percentage of self-employed. Table 1 (see above) ranks occupations in Arizona by their proportion of self-employed to overall employment. For example, the occupation with the highest percentage of self-employed is the catchall "Other" category of Health Diagnosing and Treating Practitioners -- with 44.9 percent. The largest job group in this classification is chiropractor.

More specific is the second-ranked self-employed occupation of Podiatrists -- at 43.0 percent. Not surprisingly, Podiatrists, as well as many others at the top of this list, are professional occupations requiring college or graduate-level education. In fact, 10 of the 24 occupations having 25 percent or more self-employed are professional jobs. The highest ranked occupation requiring only high school, community college or proprietary college education is Barbers. Nearly 36 percent of barbers are self-employed.

Total Number of Self-Employed Jobs

If someone preferred self-employment to wage or salary employment, or if vocational education and job-training planners were offering training that led to self-employment, the previous list of occupations would be valuable. More telling, however, may be a list of jobs with the total number of self-employed.

Table 2 ranks occupations in Arizona by the projected number of self-employed in the year 2000. As in Table 1, many of the top-ranked jobs are professional positions, usually requiring four or more years of col-

(Continued on Page 4)

TABLE 2

OES OCCUPATIONAL TITLE	Self-Employment	
	1988	2000
General Manager and Top Executives	6231	10286
1st Line Supervisors & Manager/Supervisors, Sales	5878	9634
Salespersons, Retail	5285	8456
Lawyers	2666	4406
Physicians and Surgeons	2550	3816
Others Sales Representatives, Executive Retail	1936	3307
All Other Managers and Administrators	1829	2911
Bookkeeping, Accounting and Auditing Clerks	1713	2778
Automotive Mechanics	1672	2663
Carpenters	1654	2652
Financial Managers	1571	2547
Hairdressers, Hairstylists and Cosmetologists	1394	2375
Teachers and Instructors, Vocational Education and Training	1746	2334
Gardners and Groundkeepers (Exc. Farm)	1419	2313
Food Service and Lodging Managers	1150	2067
Accountants and Auditors	1238	2000
1st Line Supervisors, Mechanics, Installers, Repairers	1217	1898
Janitors and Cleaners	943	1490
Insurance Sales Workers	912	1464
Stock Clerks, Sales Floor	896	1441
Dentists	941	1436
Sales Agents, Real Estate	868	1423
Truck Drivers, Heavy or Tractor Trailer	869	1401
Maintenance Repairers, General Utility	806	1277
Painters and Paperhangers, Construction and Maintenance	834	1225
Cabinetmakers and Bench Carpenters	703	1163
Sales Reps, Scientific Products and Services (Exc. Retail)	653	1155
Teachers, Special Education	879	1153
Electromechanical Equipment Assemblers, Precision	711	1152
All Other Service Supervisors and Manager/Supervisors	663	1063
Construction Managers	646	1060
Securities and Financial Services Sales Workers	649	1049
Instructors and Coaches, Sports and Physical Training	638	1046
Personnel, Training, and Labor Relations Specialists	653	1008

lege education. The top five in this list include: General Managers and Top Executives, First Line Supervisors and Managers of Sales, Lawyers, Physicians and Surgeons, and Others Sales Representatives.

Many of the traditional vocational education occupations, though, appear high on this list. There are 13 occupations expected to have 1,000 self-employed jobs in the year 2000, for which one can prepare by enrolling in vocational education courses or apprenticeships. Among these are: Bookkeeping, Accounting, and Auditing Clerks; Automotive Mechanics; Carpenters; Hairdressers, Hairstylists and Cosmetologists; and Gardeners and Groundskeepers.

Having many traditional vocational education occupations ranked high on a list of self-employed jobs speaks well for vocational education training and the fact that vocational education offers the opportunity for self-employment as well as mastering specific work skills. It also adds an element of new information to the discussion of vocational education "accountability" that is currently being waged in Arizona and in the United States.

Although the opportunities for self-employment in Arizona appear bright, the fact that some of the occupations listed in Table 2 are on commission should not be overlooked. Most notable among these occupations are: Real Estate Sales Agents, Retail Salespersons, Insurance Sales Workers, and Securities and Financial Services Sales Workers.

Employment: Self and Wage-and-Salary

A question often asked by vocational education and job-training planners is: Would the addition of self-employed to wage-and-salary employment substantially alter a demand ranking list? Comparing Table 3 to Table 4 perhaps answers that question.

Table 3 lists Arizona's top 25 occupations based on combined forecasted wage-and-salary employment and self-employment in the year 2000. Table 4 ranks occupations by

(Continued on Page 5)

TABLE 3

OES OCCUPATIONAL TITLE	Wage-and-Salary Employment & Self-Employment 1988	2000	Self-Emp. As Percent Of Total Emp.*	Self-Emp. 2000
Salesperson, Retail	56545	90470	9.3	8456
General Managers and Top Executives	38667	63832	16.1	10286
Waiters and Waitresses	30383	54697	0.6	332
General Office Clerks	31036	49494	1.9	937
Secretaries	30102	47191	0.0	0
Bookkeeping, Accounting and Auditing Clerks	28985	47020	5.9	2778
Cashiers	28920	46741	1.5	709
Food Preparation and Service Workers, Fast Food	24782	45874	1.8	847
1st Line Supervisors and Manager/Supervisor, Sales	23248	38103	25.3	9634
Janitors and Cleaners	23502	37146	4.0	1490
Registered Nurses	24374	36873	1.9	688
All Other Helpers, Laborers and Material Movers	21787	35609	2.8	997
Other Sales Representatives (Exc. Retail)	19715	33677	9.8	3307
Teachers, Elementary School	22045	28543	0.0	0
Food Preparation Workers	15015	25827	0.8	195
Carpenters	13896	22281	11.9	2652
Truck Drivers, Heavy or Tractor Trailer	13666	22037	6.4	1401
Truck Drivers, Light (Incl. Delivery and Route Workers	12960	21919	4.4	964
Maintenance Repairers, General Utility	13780	21843	5.8	1277
1st Line Supervisors, Manager/Supervisors, Clerical	13371	21259	2.0	415
Automotive Mechanics	12583	20045	13.3	2663

* Self-employment percentage is based on 1980 Census figures.

only the forecasted wage-and-salary employment in the year 2000. The two tables are remarkably similar with a few occupations moving up or down one or two places.

The lists displayed in Tables 1, 2, 3 and 4 were generated by the microcomputer OIS of Arizona. The tables listed here, however, are only the top portion of 750 occupations OIS listed in its report. Nevertheless, these tables demonstrate the value of looking at occupational demand in multiple ways. Vocational education and job-training planners who take advantage of these OIS capabilities will make better-informed decisions about the kind of training to offer in their programs.

--Ron Simon

TABLE 4

OES OCCUPATIONAL TITLE	Wage and Salary Employment 1988	2000
Salespersons, Retail	51260	82014
Waiters and Waitresses	30199	54365
General Managers and Top Executives	32436	53546
General Office Clerks	30448	48557
Secretaries	30102	47191
Cashiers	28481	46032
Food Preparation and Service Workers, Fast Food	24325	45027
Bookkeeping, Accounting and Auditing Clerks	27272	44242
Registered Nurses	23920	36185
Janitors and Cleaners	22559	35656
All Other Helpers, Laborers, and Material Movers, Hand	21177	34612
Other Sales Representatives (Exc. Retail)	17779	30370
Teachers, Elementary School	22045	28543
1st Line Supervisors and Manager/Supervisors, Sales	17370	28469
Food Preparation Workers	14902	25632
Truck Drivers, Light (Incl. Delivery and Route Workers)	12390	20955
1st Line Supervisors and Manager/Supervisors, Clerical	13110	20844
Truck Drivers, Heavy or Tractor Trailer	12797	20636
Maintenance Repairers, General Utility	12974	20566
Carpenters	12242	19629
Stock Clerks, Stockroom, Warehouse or Yard	11708	18751
Freight, Stock, and Material Movers, Hand	10962	17838
Guards	10456	17502
Receptionists and Information Clerks	10798	17471
Automotive Mechanics	10911	17382

Most Rural Areas Given "Labor Surplus" Status

The U.S. Department of Labor has classified 15 civil jurisdictions in Arizona as "labor surplus areas" for the Federal Fiscal Year, beginning Oct. 1, 1988, and ending Sept. 30, 1989. The "labor surplus" designation affects every city and county in the state outside Pima, Maricopa and Yavapai counties. (See listing at bottom of page.)

A labor surplus designation means employers can receive preference in federal contract bids if they perform more than 50 percent of the contract work within these areas. The reasoning behind this is to funnel federal procurement dollars into communities with high unemployment.

Cities with a population of at least 25,000 and all counties qualify as a labor surplus area if their unemployment rate is 20 percent higher than the national average during the previous two calendar years. In this case, civil jurisdictions that had an unemployment rate of 8 percent or higher during the period of January 1986 through December 1987 qualified as labor surplus areas. The national unemployment rate during that period was 6.7 percent.

Jurisdictions can also be classified as labor surplus areas under "exceptional circumstance" criteria if unemployment rates rise dramatically because of plant closures, contract cancellations, natural disasters and other unforeseen circumstances. The Department of Labor continues to add labor surplus areas under the "exceptional circumstance" provision during the entire fiscal-year period.

The Department of Labor designates labor surplus areas on an annual basis, beginning October 1 of each year and ending September 30 of the following year. A complete listing -- including updates -- is published in *Area Trends in Employment and Unemployment*, a labor department monthly publication. Cost is $25 for a yearly subscription and $3 for a single issue. To order the publication, write or call the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402; (202) 783-3238.

Employers in labor surplus areas who are interested in bidding on federal contracts should consult the *Commerce Business Daily*, a U.S. Department of Commerce periodical that lists federal contract requirements and projects to be awarded under preference procedures.

ELIGIBLE LABOR SURPLUS AREAS	CIVIL JURISDICTIONS INCLUDED
Apache County	Apache County
Balance of Cochise County	Cochise County less Sierra Vista (city)
Balance of Coconino County	Coconino County less Flagstaff (city)
Flagstaff (city)	Flagstaff (city) in Coconino County
Gila County	Gila County
Graham County	Graham County
Greenlee County	Greenlee County
La Paz County	La Paz County
Mohave County	Mohave County
Navajo County	Navajo County
Pinal County	Pinal County
Santa Cruz County	Santa Cruz County
Sierra Vista (city)	Sierra Vista (city) in Cochise County
Balance of Yuma County	Yuma County less Yuma (city)
Yuma (city)	Yuma (city) in Yuma County

The Arizona Labor Force in October

The state's unemployment rate extended its upward climb in October, rising to 7.0 percent. The U.S rate, on the other hand, dipped slightly to 5.3 percent. The Arizona unemployment rate has not surged as far above the U.S. rate since mid-year 1976. The state's rising rate is mostly attributable to sluggish job creation.

Seasonality was the key to the employment situation in October, as most of the 12,500 increase in wage-and-salary employment occurred in industries gearing up for the holiday and winter visitor seasons. Gains in these industries were offset by losses in Manufacturing and Construction -- industries traditionally slack this time of year.

In anticipation of the holiday shopping season, retailers added 2,900 workers to their payrolls. On a seasonally adjusted basis this gain is modest, indicating that merchants are maintaining a cautious -- rather than optimistic -- outlook toward the future. Retailers, however, could benefit from two more shopping days that fall between Thanksgiving and Christmas this year, compared to last year's 28-day shopping season.

Tourist-related services are also getting a seasonal boost as the industry gears up for the influx of winter visitors. Overall, 2,100 new jobs were added in Services and Miscellaneous with the largest gains going to hotels and lodging, amusements, and "other" services categories. This gain, paired with last month's, is a harbinger for healthy winter-tourism activity.

The Transportation, Communications, and Public Utilities sector also showed seasonal gains with Transportation expanding for its busy period. In October, 300 jobs were added, with more additions expected through year-end. Communications and Public Utilities remained flat for the month.

The largest gains for the month were found in school employment. More than half of the monthly increase -- 7,700 jobs -- was added in this sector as schools increased their staff levels, and work-study students were added to university and college payrolls.

Manufacturing, on the down side of seasonal activity, dropped 400 jobs in October. The majority of these losses were found in the high-tech-related machinery sector of Manufacturing. Over the year, growth in Manufacturing comes in at less than 1 percent. This sluggish pace is expected to continue into next year.

Construction employment slid for the second month after a summer upswing, with another 500 jobs lost. The prognosis is gloomy for this industry, which shows no signs of improving, particularly in light of rising interest rates and inmigration slowing to a trickle. The decline, or correction phase, in this industry is anticipated to extend through most of 1989.

Echoing the conditions in Construction, the Finance, Insurance, and Real Estate (FIRE) sector dropped another 200 employees in October. The slump in FIRE now stretches to 11 months. Over the year, employment in FIRE has fallen 4.2 percent and will not improve until Construction rebounds.

Other industries exhibiting significant losses for the month of October were Mining and Quarrying, and the business services sector of Services and Miscellaneous. Mining, after showing stable growth most of the

(Continued on Page 12)

Arizona Labor Force and Employment

October 1988 (in thousands)

	Arizona				
				Amount Change	
	Oct.* 1988	Sep. 1988	Oct. 1987	Sep.- Oct.	1987- 1988
TOTAL CIVILIAN LABOR FORCE**	1715.7	1675.1	1631.8	+40.6	+83.9
Total Unemployment	117.7	113.0	93.1	+4.7	+24.6
Rate	6.9	6.7	5.7	----	----
Rate (Sea. Adj.)***	7.0	6.8	5.8	----	----
Total Employment	1598.0	1562.1	1538.7	+35.9	+59.3

The Above Labor Force Statistics Shoul

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

TOTAL WAGE AND SALARY	1418.9	1406.4	1407.0	+12.5	+11.9
Manufacturing	189.4	189.8	187.9	-0.4	+1.5
Durable Goods	146.0	146.2	146.2	-0.2	-0.2
Stone, Clay, and Glass	7.3	7.2	7.8	+0.1	-0.5
Primary and Fabricated Metals	16.2	16.0	16.0	+0.2	+0.2
Primary Metals	7.4	7.3	7.3	+0.1	+0.1
Fabricated Metals	8.8	8.7	8.7	+0.1	+0.1
Machinery	65.4	65.8	64.8	-0.4	+0.6
Other Durable Goods	57.1	57.2	57.6	-0.1	-0.5
Aircraft and Missiles	26.2	26.3	26.9	-0.1	-0.7
Lumber and Wood Product (Excluding Furniture)	8.7	8.7	8.5	+0.0	+0.2
All Other Durable Goods	22.2	22.2	22.2	+0.0	+0.0
Nondurable Goods	43.4	43.6	41.7	-0.2	+1.7
Food and Kindred Products	9.5	9.7	9.4	-0.2	+0.1
Apparel	4.6	4.6	4.6	+0.0	+0.0
Printing and Publishing	16.3	16.1	16.1	+0.2	+0.2
All Other Nondurable Goods	13.0	13.2	11.6	-0.2	+1.4
Mining and Quarrying	12.1	12.2	11.6	-0.1	+0.5
Copper Mining	9.0	9.1	8.6	-0.1	+0.4
Other Mining and Quarrying	3.1	3.1	3.0	+0.0	+0.1
Construction	95.5	96.0	101.2	-0.5	-5.7
Trans., Communications, & Public Utilities	73.0	72.7	73.7	+0.3	-0.7
Transportation	37.0	36.7	37.1	+0.3	-0.1
Communications and Public Utilities	36.0	36.0	36.6	+0.0	-0.6
Trade	346.3	342.9	341.0	+3.4	+5.3
Wholesale Trade	68.9	68.4	68.6	+0.5	+0.3
Retail Trade	277.4	274.5	272.4	+2.9	+5.0
General Merchandise and Apparel	43.1	41.9	44.2	+1.2	-1.1
Food Stores	46.4	45.7	44.2	+0.7	+2.2
Automotive and Service Stations	33.3	33.4	32.5	-0.1	+0.8
Eating and Drinking Places	98.7	98.0	95.5	+0.7	+3.2
Other Retail Trade	55.9	55.5	56.0	+0.4	-0.1
Finance, Insurance, and Real Estate	91.3	91.5	95.3	-0.2	-4.0
Services and Miscellaneous	357.3	355.2	350.2	+2.1	+7.1
Hotels and Other Lodging Places	40.4	39.1	37.3	+1.3	+3.1
Business Services	75.6	76.2	76.7	-0.6	-1.1
Health Services	91.0	90.9	87.8	+0.1	+3.2
Other Services	150.3	149.0	148.4	+1.3	+1.9
Government	254.0	246.1	246.1	+7.9	+7.9
Federal	43.3	43.8	43.3	-0.5	+0.0
State and Local	210.7	202.3	202.8	+8.4	+7.9
School	123.3	115.6	120.3	+7.7	+3.0

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

October 1988 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
Oct.* 1988	Sep. 1988	Oct. 1987	Sep.- Oct.	1987- 1988	Oct.* 1988	Sep. 1988	Oct. 1987	Sep.- Oct.	1987- 1988
1059.8	1036.6	1012.6	+23.2	+47.2	325.8	317.9	309.5	+7.9	+16.3
60.9	57.3	49.0	+3.6	+11.9	18.5	17.2	14.6	+1.3	+3.9
5.7	5.5	4.8	----	----	5.7	5.4	4.7	----	----
5.8	5.5	4.9	----	----	5.7	5.5	4.7	----	----
998.9	979.3	963.6	+19.6	+35.3	307.3	300.7	294.9	+6.6	+12.4

Not Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

931.3	924.2	927.6	+7.1	+3.7	250.1	247.7	246.5	+2.4	+3.6
138.2	138.7	136.5	-0.5	+1.7	30.0	30.1	30.8	-0.1	-0.8
107.8	108.0	107.3	-0.2	+0.5	24.3	24.4	25.3	-0.1	-1.0
4.9	4.8	5.2	+0.1	-0.3					
11.0	10.9	10.7	+0.1	+0.3					
51.9	52.2	51.7	-0.3	+0.2					
40.0	40.1	39.7	-0.1	+0.3					
30.4	30.7	29.2	-0.3	+1.2	5.7	5.7	5.5	+0.0	+0.2
6.2	6.3	6.1	-0.1	+0.1					
3.5	3.6	3.4	-0.1	+0.1					
11.3	11.2	11.5	+0.1	-0.2					
9.4	9.6	8.2	-0.2	+1.2					
0.6	0.6	0.6	+0.0	+0.0	1.8	1.8	1.6	+0.0	+0.2
63.8	64.1	68.1	-0.3	-4.3	18.5	18.6	19.3	-0.1	-0.8
50.4	50.1	50.7	+0.3	-0.3	9.5	9.5	9.6	+0.0	-0.1
26.9	26.7	26.8	+0.2	+0.1	4.6	4.6	4.7	+0.0	-0.1
23.5	23.4	23.9	+0.1	-0.4	4.9	4.9	4.9	+0.0	+0.0
233.3	231.4	231.4	+1.9	+1.9	57.4	57.1	55.6	+0.3	+1.8
54.4	54.1	54.2	+0.3	+0.2	8.2	8.3	8.0	-0.1	+0.2
178.9	177.3	177.2	+1.6	+1.7	49.2	48.8	47.6	+0.4	+1.6
27.1	26.8	28.7	+0.3	-1.6	7.4	7.2	7.5	+0.2	-0.1
29.9	29.3	28.5	+0.6	+1.4	7.8	7.8	7.3	+0.0	+0.5
20.6	20.6	20.2	+0.0	+0.4	5.7	5.8	5.5	-0.1	+0.2
63.6	63.0	61.2	+0.6	+2.4	18.1	18.0	17.5	+0.1	+0.6
37.7	37.6	38.6	+0.1	-0.9	10.2	10.0	9.8	+0.2	+0.4
72.7	72.8	75.6	-0.1	-2.9	12.0	12.1	12.6	-0.1	-0.6
240.8	239.6	235.8	+1.2	+5.0	67.1	66.2	65.9	+0.9	+1.2
23.5	22.4	21.0	+1.1	+2.5	6.8	6.4	6.8	+0.4	+0.0
60.1	60.7	61.7	-0.6	-1.6	11.0	11.1	10.8	-0.1	+0.2
59.8	60.0	57.6	-0.2	+2.2	19.3	19.2	18.7	+0.1	+0.6
97.4	96.5	95.5	+0.9	+1.9	30.0	29.5	29.6	+0.5	+0.4
131.5	126.9	128.9	+4.6	+2.6	53.8	52.3	51.1	+1.5	+2.7

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
October 1988

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	15,525	36,600	44,500	13,300	9,075	3,175	5,150
Total Unemployment	2,425	3,500	3,675	1,650	950	325	500
Rate	15.6%	9.6%	8.3%	12.4%	10.5%	10.2%	9.7%
Rate (Seas. Adj.)**	16.6%	9.9%	9.0%	12.7%	10.9%	10.0%	9.6%
Total Employment	13,100	33,100	40,825	11,650	8,125	2,850	4,650

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	15,300	25,225	39,350	10,800	5,500	2,975	3,400
Manufacturing	825	1,225	2,975	1,300	225	75	325
Mining & Quarrying	50	125	150	1,325	0	1,600	75
Construction	1,000	1,075	1,725	650	200	200	150
T.C.P.U.	1,900	1,625	2,475	375	150	50	100
Trade	1,575	5,375	9,250	2,375	1,550	225	1,075
F.I.R.E.	325	675	775	275	100	25	100
Services & Misc.	4,475	4,475	10,125	1,850	900	125	775
Government	5,150	10,650	11,875	2,650	2,375	675	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	32,200	27,950	40,025	11,475	38,300	52,775
Total Unemployment	2,225	3,425	3,925	2,525	2,525	10,650
Rate	6.9%	12.3%	9.8%	22.0%	6.6%	20.2%
Rate (Seas. Adj.)**	7.1%	13.0%	10.4%	19.8%	6.7%	21.5%
Total Employment	29,975	24,525	36,100	8,950	35,775	42,125

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	21,950	20,650	30,550	9,275	25,350	27,275
Manufacturing	2,925	1,975	3,800	1,350	2,300	1,875
Mining & Quarrying	325	1,200	3,700	0	950	100
Construction	1,725	1,150	1,400	325	2,225	1,425
T.C.P.U.	1,225	1,825	975	525	900	1,125
Trade	6,300	4,125	5,325	3,650	6,750	8,000
F.I.R.E.	950	375	800	375	975	925
Services & Misc.	4,825	4,675	4,275	1,450	5,500	5,900
Government	3,675	5,325	10,275	1,600	5,750	7,925

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Oct.* 1988	Sep. 1988	Oct. 1987	Oct.* 1988	Sep. 1988	Oct. 1987	Oct.* 1988	Sep. 1988	Oct. 1987
Manufacturing	403.34	409.36	405.59	40.7	41.1	40.6	9.91	9.96	9.99
Aircraft & Missiles	INA	INA	552.51	INA	INA	43.3	INA	INA	12.76
Food & Kindred Prod.	323.44	325.75	385.06	39.3	39.2	41.9	8.23	8.31	9.19
Primary Metals	512.62	522.10	476.69	39.8	40.1	37.3	12.88	13.02	12.78
Machinery	399.19	403.60	392.21	40.2	40.4	39.3	9.93	9.99	9.98
Copper Mining	534.78	515.44	499.79	41.2	40.3	40.6	12.98	12.79	12.31
Construction	413.67	426.68	419.04	35.6	36.5	36.0	11.62	11.69	11.64
Utilities	661.86	636.01	584.03	42.4	42.8	41.1	15.61	14.86	14.21
Retail Trade**	244.36	250.00	244.83	32.8	33.2	32.3	7.45	7.53	7.58
Wholesale Trade	393.03	386.28	395.36	39.7	39.7	39.3	9.90	9.73	10.06

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Oct.* 1988	Sep. 1988	Oct. 1987	Oct.* 1988	Sep. 1988	Oct. 1987	Oct.* 1988	Sep. 1988	Oct. 1987
Manufacturing	428.04	442.68	442.15	41.0	42.2	41.4	10.44	10.49	10.68
Construction	426.22	445.06	428.19	35.4	36.6	35.3	12.04	12.16	12.13
Retail Trade**	268.46	275.47	266.49	33.6	33.8	32.9	7.99	8.15	8.10
Wholesale Trade	417.28	411.27	396.15	40.2	40.4	38.8	10.38	10.18	10.21

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Oct.* 1988	Sep. 1988	Oct. 1987	Oct.* 1988	Sep. 1988	Oct. 1987	Oct.* 1988	Sep. 1988	Oct. 1987
Manufacturing	380.56	382.08	359.58	39.6	39.8	39.0	9.61	9.60	9.22
Copper Mining	609.00	591.16	519.99	43.5	42.9	41.8	14.00	13.78	12.44
Construction	369.96	378.88	384.75	36.2	37.0	37.5	10.22	10.24	10.26
Utilities	575.87	581.99	554.55	41.4	41.9	41.2	13.91	13.89	13.46

* Preliminary

** Excludes eating and drinking places

NOTE: These estimates are based on a sample of full-time and part-time production and related employees whose payroll and hours are reported for the pay period that includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs October 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,715,664	1,597,951	117,713	6.9%
Apache	15,543	13,112	2,431	15.6
Cochise	36,592	33,100	3,492	9.5
Coconino	44,480	40,815	3,665	8.2
Gila	13,285	11,639	1,646	12.4
Graham	9,091	8,129	962	10.6
Greenlee	3,179	2,857	322	10.1
La Paz	5,134	4,644	490	9.5
Maricopa	1,059,807	998,881	60,926	5.7
Mohave	32,214	29,987	2,227	6.9
Navajo	27,955	24,520	3,435	12.3
Pima	325,752	307,293	18,459	5.7
Pinal	40,021	36,091	3,930	9.8
Santa Cruz	11,499	8,962	2,537	22.1
Yavapai	38,322	35,787	2,535	6.6
Yuma	52,788	42,132	10,656	20.2

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in October

(Continued from Page 7)

year, fell by 100 for the second straight month. Business services fell by 600 with most of the decline coming in the temporary services portion. Over the last 12 months business services employment shrank by 1,100.

The lackluster performance of the economy is expected to continue as factors causing the sluggish growth -- poor performance of Manufacturing, Construction industry downturn, and receding in-migration -- remain in place. Adding more uncertainty to the outlook is the uneasiness surrounding the national economic climate as a new administration begins its term.

--Rosemary Reardon

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported from these sources.

MANUFACTURING - **International Gear,** a manufacturer of helicopter transmissions and precision gears for the aerospace industry, is considering moving its headquarters and manufacturing plant to the Valley. If the Cleveland-based company, a subsidiary of Argo-Tech, moves to Phoenix (one of three sites under consideration), it would create 500 jobs with a weekly payroll of $325,000.

Security 777 USA expects to have a lock on business when it starts manufacturing its "burglar proof" locks in January. The Chandler company plans to hire 40 people to make locks and other security products. First-year gross sales are expected to reach $15 million, says company founder Alois Crepinsek, who claims the company's unique locks, which have as many as 16 blocking pins, cannot be picked.

Scott Paper Co. has purchased 70 percent of **Texstyrene Co.**'s assets, which include two Valley foam-cup plants -- in Phoenix and Tolleson. Scott Paper officials say a growing world market for food-service disposals ($12 billion) prompted the purchase of 12 Texstyrene plants nationally. The two Valley facilities employ 271 workers and produce 2¼ million cups daily.

CONSTRUCTION - A Scottsdale-based developer, **Christiana Corp.**, has proposed building a multimillion-dollar office and commercial park that will eventually generate nearly 15,000 jobs. The 161-acre project at Ellsworth and Baseline roads, called **Telecenter International,** will be geared to the high-tech industry with the hope of luring a major Pacific Rim-based company.

Plans for two major projects in central and east Phoenix were recently announced. **Perini Land & Development Co.** is expected to build a $150 million mixed-use project at the northeast corner of Coronado Road and Central, two blocks north of McDowell Road. Called **The Coronado,** the project will feature a 19-story, 355,000-square-foot office tower; a public plaza and amphitheater; 60 to 100 residential units; and a 2,100-space underground parking garage. The development is expected to be completed in late 1990. At 44th Street and the Papago Freeway, **Camelhead Equities** is planning a $225 million endeavor called **The Oasis.** The first phase of the development will include a 13-story, 385-room hotel; an eight-story, 150-square-foot office structure; and an entertainment center consisting of eight to 10 restaurants and nightclubs. Construction is planned to begin in January 1990.

Changes in two Valley housing developments were announced in November, while an energy-efficient community near Tucson was proposed. In a positive move, **UDC-Universal L.P.** purchased a 1,447-acre tract on the southern slopes of South Mountain in Phoenix from Del Webb Corp. and Burns International for $50 million. As part of The Foothills development, a 4,140-acre master-planned community, UDC plans to build 3,000 homes that will range in price from $100,000 to $300,000. ... Plans by **SunCor Development Co. of Phoenix** and **American Newland Associates** for a 10,000-acre joint venture in

(Continued on Page 14)

Litchfield Park (20 miles west of Phoenix) have been scrapped because the two sides were unable to agree on financial terms. An official with SunCor, a subsidiary of Pinnacle West Corp., said alternatives are being studied, including negotiations with other real state-development companies. ... **State, county and U.S. government agencies, the University of Arizona and a volunteer group of 16** are involved in planning a solar village southeast of Tucson. Construction of the 1,000-home community, to be built on the east side of Houghton Road several miles north of Interstate 10, will begin in four years. Planning is being funded by a $210,000 grant from the state's oil-overcharge fund, money oil companies returned to the state for overcharging consumers in the 1970s.

TRANSPORTATION, COMMUNICATIONS and PUBLIC UTILITIES - **IDEA Courier Inc.**, formerly Alcatel Information Systems, has dismissed 200 employees at its Tempe headquarters due to a company reorganization, precipitated by Alcatel's sale to IDEAssociates Inc. of Billerica, Mass. IDEA primarily manufactures IBM-compatible computer terminals, controllers and printers, and high performance microprocessor-based computers. The layoffs, which include some executives, leave IDEA with 600 people in Tempe and 600 in field offices.

Dallas-based **Southwest Airlines** will add three gates at Terminal 1 of Phoenix Sky Harbor International Airport by April at a cost of $3 million. The expansion -- to 12 gates -- is considered a temporary solution for Southwest, which will move into Terminal 4 with America West Airlines when the new terminal is completed in October 1990.

Lufthansa German Airlines has announced plans to build a 4,500-foot practice runway for its pilot-training program in Mobile, located 30 miles south of Goodyear. As part of its expansion plans, Lufthansa has also proposed to spend $10 million for new buildings and equipment at Phoenix-Goodyear Municipal Airport. The Federal Aviation Administration has approved the runway project, but Lufthansa is awaiting word from state and local officials.

TRADE - Competition for the fast-food dollar should sizzle in Arizona when some of the planned 55 new **Rally's** restaurants open. Quick Service Restaurants Inc., which holds the Ralley's franchise rights in the state, plans to build 45 stores in the Valley and eight to 10 in Tucson. Twenty-four stores -- including five already open -- are slated to be operating in the Valley by January 1990. Ralley's restaurants feature a limited menu at low cost -- primarily hamburgers -- and double-drive-through windows.

Marching bands, floats and Gov. Rose Mofford marked the November opening of the **Cibecue Shopping Center**, the first on the Apache reservation. The million dollar center, funded entirely by the tribe, employs about 80 people. Cibecue is located about 50 miles southeast of Show Low.

About 120 employees of **A.M. Lewis Inc.** in Phoenix are losing their jobs because of the shutdown of a Phoenix warehouse at 435 S. 59th Ave. News of the closing came as a surprise to employees, who were told a month earlier by officials of Price Co., the warehouse's new owner, Price would try to revive the troubled wholesaler. Price, which owns Price Club membership warehouses, said in October it had bought A.M. Lewis for $48 million.

Plans for a "megamall" in east Mesa have received the OK from that city's Planning and Zoning Commission, while two Scottsdale malls have decided it's better to join

(Continued on Page 15)

than fight. The proposed 1.3-million-square-foot **Superstition Springs Mall**, scheduled to be completed in October 1990, would be the Valley's second largest shopping center (behind Metrocenter) and have 150 stores including five major department stores. The owners of the **Scottsdale Fashion Square** and **Camelview Plaza**, meanwhile, have agreed to link their shopping centers with a two-story bridge that will house about 30 specialty shops. The bridge, considered an integral part of Westcor Partners II's $100 million redevelopment plan for the northwest corner of Scottsdale and Camelback roads, will span 70th Street at Camelback Road.

FINANCE, INSURANCE and REAL ESTATE - **PriMerit Bank**, formerly Nevada Savings and Loan, plans to open eight branches in the Valley by the end of 1989. A wholly owned subsidiary of Southwest Gas Corp., PriMerit has 26 branches in Nevada and assets of $2.75 billion. The federally chartered savings and loan currently has two branches in the Valley.

Older employees will be the target of **Northwestern National Life Insurance Co.** when it opens a computerized claims center in Tucson in 1989. The $6.8 billion Minneapolis-based company wants half of its part-time positions (equal to 25 full-time slots) to be filled by persons 50 years of age or older.

SERVICES and MISCELLANEOUS - Citing losses from patients on Medicare and cut-rate contracts with health-maintenance organizations, Samaritan Health Services will eliminate 403 jobs from its hospitals and administrative staff by the end of the year. About 220 workers will be laid off and 183 vacant positions will not be filled. For the year, Samaritan has cut 7 percent of its staff to about 8,200 workers.

Two large nursing facilities and a life-care retirement facility are planned or are under construction in the Valley. **Marriott Corp.**, through its Senior Living Services Division, will build two 62,000-square-foot "assisted-living" units in Sun City and Scottsdale. Assisted-living units are for people who are mentally sound but frail of body. Each facility will house about 100 units. And the $25 million **Freedom Plaza Life-Care Retirement Community**, which offers limited and unlimited nursing care, will be part of the Plaza del Rio master-planned community at Thunderbird Road and 94th Drive in Peoria. The seven-story facility will have 350 units.

Superior Training Services is relocating its truck-driving and heavy-equipment programs in Phoenix to a campus near San Bernardino, Calif. Twenty-seven instructors and mechanics will have the chance to transfer to Superior's other U.S. campuses. Superior is the subject of a $366 million lawsuit by the federal government, which accuses the company of defrauding the U.S. Department of Education by misrepresenting the length of its courses and exaggerating the success of graduates in finding work.

FRE Inc. of Kansas City, Mo., will try to pump life into the previously bankrupt Oasis Family Water Park at Pinnacle Peak Road and 43rd Avenue in Phoenix. When the 34-acre amusement park opens in April as **Waterworld USA**, it will have extensive improvements including a new feature, Tom Sawyer's Landing. The park will hire about 350 employees for its seven-month season.

GOVERNMENT - **State-agency chiefs** have been asked by Gov. Rose Mofford to trim up to 5 percent of their planned spending to make up for an expected $53 million budget shortfall. The cuts, which could include hiring freezes, will be implemented Feb. 1.

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2/10/89

ARIZONA
LABOR MARKET INFORMATION NEWSLETTER

Vol. XIII No. 1
January 1989

Unemployment Rate

Seasonally Adjusted
November*

ARIZONA -	6.8%
Maricopa County -	5.7%
Pima County -	5.6%
UNITED STATES -	5.4%

Consumer Price Index

U.S. - October 1988
Base = 1982-84

Wage Earner/Clerical Worker	- 119.0
% Chg. Year Ago -	4.1
All Urban	- 120.3
% Chg. Year Ago -	4.2

Phoenix - 3rd Qtr 1988
Base = 1982-84

All Urban	- 120.9
% Chg. Year Ago -	4.1

Tucson - 3rd Qtr 1988
Base = 1982-84

All Urban	- 121.8
% Chg. Year Ago -	2.0

* Preliminary

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LABOR MARKET INFORMATION
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005-6123
(602) 542-3871

Brent Fine, Editor
Linda Van Calcar, Word Processor

DES Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Annual-Pay Increase for State, Metro Areas Lags National Average

Arizona's ranking among other states and the District of Columbia for annual pay of workers covered by state and federal Unemployment Insurance (UI) stayed virtually the same from 1986 to 1987. But UI-covered workers in the state failed to keep pace nationally in terms of annual percentage increase.

The metropolitan areas of Phoenix and Tucson, however, dropped slightly in rankings for average annual pay among Metropolitan Statistical Areas (MSAs) during the same period, although the Phoenix MSA stayed even on an annual percentage-increase basis. (An MSA is defined as an area that either has a city with a population of 50,000, or contains a U.S. Bureau of the Census-defined "urbanized area" of 50,000 in population and metropolitan area population of 100,000.)

Average annual pay statistics for Arizona, and the Phoenix and Tucson MSAs in 1987 are part of preliminary data issued in two U.S. Department of Labor, Bureau of Labor Statistics news releases (USDL 88-413 and 88-516) and the publication, *Employment and Wages, Annual Averages, 1987.*

Arizona's average annual pay of $19,604 tied for 21st (with Missouri) in 1987, an increase of 3.7 percent over the previous year. In 1986, the state ranked 22nd with an average of $18,876. Arizona, however, did not keep pace nationally, with average annual pay for all states and Washington D.C. increasing 4.2 percent to $20,852 in 1987.

Looking at the state by industry, workers in the Services sector fared the best on a percentage-increase basis, with a rise in average annual pay of 7.3 percent. Manufacturing was second, at 5.3 percent, and Finance, Insurance, and Real Estate (FIRE) was third, at 4.8 percent. Employees faring the worst were in Mining and Construction, where pay decreased 3.0 percent and 0.7 percent, respectively.

The Phoenix MSA's 4.5 percent rise in average annual pay from 1986 to 1987 basically remained even with the MSA national average (4.6 percent), but it wasn't enough to prevent its MSA ranking to drop from 75 to 80. The Phoenix MSA annual pay averaged $20,612 in 1987, compared to a national average of $21,724 for 317 MSAs surveyed.

The Tucson MSA fared much worse, with an annual average pay increase of 3.4 percent, which is reflected in its drop in rank from 169 to 188.

(Continued on Page [illegible])

ARIZONA AVERAGE ANNUAL PAY BY INDUSTRY

	1986	1987(3)	Percent Chg. 1986-1987(4)
Private Industry			
Overall	$18,351	$19,049	3.8
Mining	30,217	29,297	-3.0
Construction	20,598	20,445	-0.7
Manufacturing	24,786	26,109	5.3
Transportation, Communications, and Public Utilities	24,958	25,335	1.5
Wholesale Trade	22,849	23,619	3.4
Retail Trade	11,492	11,741	2.2
Finance, Insurance., and Real Estate	22,582	23,660	4.8
Services	16,337	17,526	7.3
Government			
Overall	21,559	22,481	4.3

Source: News, U.S. Bureau of Labor Statistics, USDL 88-413, Aug. 24, 1988.

ANNUAL PAY LEVELS IN STATES, METROPOLITAN AREAS

State	Metro Area (1)	Average Annual Pay		Rank by Pay	Pct. Change	Rank by Change
		1986	1987(2,3)	1987	1986-1987(4)	1986-1987
Overall		19968	20852	----	4.2	----
	Overall	20762	21724	----	4.6	----
Alabama		17628	18304	36	3.7	24 (tie)
	Birmingham	19917	19164	110	3.9	142
Alaska		28444	28028	2	-1.5	51
	Anchorage	28742	28486	1	-.9	313
Arizona		**18876**	**19604**	**21 (tie)**	**3.7**	**24 (tie)**
	Phoenix	**19730**	**20612**	**80**	**4.5**	**101**
	Tucson	**17951**	**18566**	**188**	**3.4**	**174**
Arkansas		16172	16536	46 (tie)	2.3	39 (tie)
	Little Rock	18469	18912	168	2.4	245
California		21996	23088	6 (tie)	4.7	13 (tie)
	Los Angeles	23482	25005	11	6.5	29
	Sacramento	20223	21047	61	4.1	126
	San Diego	20146	21051	60	4.5	101
	San Francisco	25594	26594	5	3.9	142
Colorado[1]		20280	20748	11 (tie)	2.3	39 (tie)
	Denver	22283	22895	26	2.7	231
Connecticut		22516	24336	4	7.5	1
	Hartford	22395	24151	15	7.8	9
Deleware		19604	20748	11 (tie)	5.5	8
	Wilmington	21351	22266	37	4.3	113
Washington D.C.		27144	28496	1	4.7	13 (tie)
Florida		17680	18668	32	5.3	9
	Miami	19785	20988	64	6.1	37
	Tampa-St. Pet.	17116	17911	215	4.6	95
Georgia		18772	19656	20	4.5	16 (tie)
	Atlanta	21243	22426	33	5.6	58
Hawaii		18096	19084	25	5.2	10
	Honolulu	18724	19718	123	5.3	69
Idaho		16640	17056	45	2.4	38
	Boise	18814	19371	139	3.0	210
Illinois		21476	22256	9	2.3	39 (tie)
	Chicago	23155	24059	17	3.9	142
	Peoria	20370	21205	54	4.1	126
Indiana		19032	19708	19	3.4	27 (tie)
	Indianapolis	20115	21081	58	4.6	83
Iowa		16640	17316	43	3.9	21 (tie)
	Des Moines	18728	19389	138	3.5	161
Kansas		17940	18408	35	2.5	35 (tie)
	Wichita	20527	20897	68	1.8	274
Kentucky		17316	17992	38	3.8	23
	Louisville	18684	19448	134	4.1	126
Louisiana		18304	18720	31	2.2	45 (tie)
	New Orleans	19264	19788	119	2.7	231
Maine		16328	17472	42	6.5	3
	Portland	17598	18673	183	6.1	37

ANNUAL PAY LEVELS IN STATES, METROPOLITAN AREAS (Cont.)

State	Metro Area (1)	Average Annual Pay 1986	Average Annual Pay 1987(2,3)	Rank by Pay 1987	Pct. Change 1986-1987(4)	Rank by Change 1986-1987
Maryland		20124	21320	10	5.6	6 (tie)
	Baltimore	19911	20978	65	5.4	64
Massachusetts		20904	22464	8	6.9	2
	Boston	22250	23888	19	7.4	13
Michigan		22724	23088	6 (tie)	1.6	48
	Detroit	24806	25301	9	2.0	266
Minnesota		19604	20436	15 (tie)	4.0	19 (tie)
	Minnepls.-St. Paul	21495	22385	35	4.1	126
Mississippi		15444	15964	50	3.3	29 (tie)
	Jackson	17267	17837	219	3.3	181
Missouri		18928	19604	21 (tie)	3.4	27 (tie)
	St. Louis	20969	21793	46	3.9	142
	Kansas City	20062	20848	70	3.9	142
Montana		16068	16432	48	2.2	45 (tie)
	Great Falls	16263	16571	281	1.9	270
Nebraska		16120	16536	46 (tie)	2.5	35 (tie)
	Omaha	18072	18461	190	2.2	256
Nevada		18720	19500	23	4.0	19 (tie)
	Las Vegas	18617	19359	140	4.0	133
	Reno	18708	19563	130	4.6	95
New Hampshire		18304	19396	24	5.6	6 (tie)
	Manchester	20107	21502	48	6.9	22
New Jersey		22360	23868	5	3.2	31
	Newark	23962	25536	6	6.6	28
New Mexico		17316	17784	40	2.6	34
	Albuquerque	18492	19162	149	3.6	167
New York		23192	24648	3	5.9	5
	New York City	26241	28179	2	7.4	13
	Buffalo	18732	19324	142	3.2	188
North Carolina		16952	17836	39	4.5	16 (tie)
	Charlotte	18650	19806	117	6.2	36
	Raleigh-Durham	19613	20366	94	3.8	151
North Dakota		15808	16172	49	2.3	39 (tie)
	Fargo	16758	17123	253	2.2	256
Ohio		19916	20592			
	Cleveland	21190	21985	42	3.7	156
	Columbus	19640	20333	96	3.5	161
	Cincinnati	20281	21150	57	4.3	113
Oklahoma		18356	18616	33	1.4	49
	Oklahoma City	19144	19534	131	2.0	266
Oregon		18304	18876	26 (tie)	3.0	33
	Portland	19934	20584	85	3.3	181
Pennsylvania		19396	20384	15 (tie)	4.8	12
	Philadelphia	21115	22447	32	6.3	34
	Pittsburgh	20187	21019	63	4.1	126
Rhode Island		17732	18876	26 (tie)	6.0	4
	Providence	17574	18696	179	6.4	32
South Carolina		16588	17264	44	3.6	21 (tie)
	Charleston	16572	17167	251	3.6	167

ANNUAL PAY LEVELS IN STATES, METROPOLITAN AREAS (Cont.)

State	Metro Area(1)	Average Annual Pay		Rank by Pay	Pct. Change	Rank by Change
		1986	1987(2,3)	1987	1986-1987(4)	1986-1987
South Dakota		14508	14976	51	3.1	32
	Sioux Falls	16957	17456	239	2.9	219
Tennessee		17680	18512	34	4.5	16 (tie)
	Memphis	18799	19709	124	4.8	83
	Nashville	18667	19737	122	5.7	54
Texas		19968	20488	14	2.5	35 (tie)
	Dallas	22769	23624	21	3.8	151
	El Paso	15747	16142	298	2.5	241
	Houston	23175	23509	24	1.4	289
	San Antonio	17843	18436	192	3.3	181
Utah		17888	18304	36 (tie)	2.3	39 (tie)
	Salt Lake-Ogden	18306	18856	170	3.0	210
Vermont		16848	17680	41	4.7	13 (tie)
	Burlington	19556	20422	89	4.4	109
Virginia		18980	19968	18	4.9	11
	Richmond-Petrsbrg	19348	20374	93	5.3	69
Washington		19656	20124	17	2.3	39 (tie)
	Seattle	21928	22543	31	2.8	225
West Virginia		18408	18824	29 (tie)	2.2	45 (tie)
	Charleston	19951	20352	95	2.0	266
Wisconsin		18200	18876	26 (tie)	3.6	26
	Milwaukee	20143	20838	71	3.5	161
Wyoming		18980	18824	29 (tie)	-1.0	50
	Cheyenne	17936	18103	206	.9	300

Source: Employment and Wages, Annual Averages, 1987, U.S. Dept. of Labor, November 1988, Bulletin 2314.

Footnotes:

1. Includes data for Metropolitan Statistical Areas and Primary Metropolitan Statistical Areas as of June 30, 1988.
2. Figure for 1987 includes estimate for fourth quarter.
3. Data are preliminary.
4. Percent changes computed from unrounded average annual pay data and may differ from pay data rounded to the nearest dollar.

(Continued from Page 2)

Average annual pay for the Tucson MSA in 1987 was $18,566, more than $3,000 below the national average.

Data for average annual pay are compiled from federal and state UI payroll reports on 101 million workers. Included in the data are bonuses, cash value of meals and lodging, tips and other gratuities, and employer contributions to certain deferred compensation plans.

Major exclusions from UI data include: most agricultural workers on small farms; all members of the military; most elected officials, railroad employees, domestic workers, and student workers at schools; employees of certain small nonprofit organizations; self-employed individuals; and all unpaid members of a family business.

"Average" pay is determined by dividing total annual pay of full- and part-time employees by the average monthly number of employees. Caution is advised when using these data, however, as certain factors can skew pay averages. Among these are ratio of full-time to part-time workers, and number of individuals in high-paying and low-paying occupations. Retail trade businesses, for instance, generally have a large percentage of part-time employees.

--Brent Fine

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The Arizona Labor Force in November

Arizona's unemployment rate dipped to 6.8 percent in November, as the number of unemployed fell by 4,800. Several factors caused the drop, including a growing number of discouraged job seekers leaving the market, and slowed in-migration.

A total of 7,300 wage-and-salary jobs were added to the state's economy in November -- a weak increase, particularly when seasonal factors are considered. Retail Trade and Government employment showed strong growth while troubled conditions persisted in Construction, and Finance, Insurance, and Real Estate (FIRE). Manufacturing also contributed to the lackluster performance as employment fell for the second straight month. The remaining industries exhibited little change from October.

Retail Trade employment jumped by 5,400, more than 1,200 above October's gain. Compared to previous years, November's Retail Trade growth was reasonably good.

Government added 3,600 jobs during November, with the gains coming primarily in schools and at the state level. Over the year, growth in this sector comes in at 3.2 percent, well below the 5.4 percent growth recorded over the same period last year. Slower growth in this sector is a consequence of the state's sluggish in-migration rate.

Construction continues to be the major drag on the Arizona economy. The industry entered its 29th month of decline in November, losing another 1,300 jobs. With no turnaround expected before late 1989 or 1990, the current contraction will no doubt be longer than the 31-month cycle of the previous Construction decline.

Employment in FIRE fell in November for the 12th consecutive month. The loss of 500 jobs brings the total number of jobs lost in this sector since November 1987 to 4,500, a 4.7 percent drop. Losses in FIRE came from financial and real estate sectors, both hurt by a lack of activity in Construction.

While Manufacturing is typically slack this time of year, the drop of

(Continued on Page 12)

Arizona Labor Force and Employment

November 1988 (in thousands)

	Arizona Nov.* 1988	Arizona Oct. 1988	Arizona Nov. 1987	Amount Change Oct.- Nov.	Amount Change 1987- 1988
TOTAL CIVILIAN LABOR FORCE**	1748.3	1719.9	1640.8	+28.4	+107.5
Total Unemployment	114.2	119.0	94.2	-4.8	+20.0
Rate	6.5	6.9	5.7	----	----
Rate (Sea. Adj.)***	6.8	7.1	5.9	----	----
Total Employment	1634.1	1600.9	1546.6	+33.2	+87.5

The Above Labor Force Statistics Should No

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Nov.* 1988	Oct. 1988	Nov. 1987	Oct.- Nov.	1987- 1988
TOTAL WAGE AND SALARY	1429.0	1421.7	1417.2	+7.3	+11.8
Manufacturing	188.5	189.5	188.1	-1.0	+0.4
Durable Goods	145.2	146.1	146.4	-0.9	-1.2
Stone, Clay, and Glass	7.2	7.3	7.7	-0.1	-0.5
Primary and Fabricated Metals	16.2	16.2	15.9	+0.0	+0.3
Primary Metals	7.4	7.4	7.3	+0.0	+0.1
Fabricated Metals	8.8	8.8	8.6	+0.0	+0.2
Machinery	65.1	65.6	65.0	-0.5	+0.1
Other Durable Goods	56.7	57.0	57.8	-0.3	-1.1
Aircraft and Missiles	26.2	26.2	26.9	+0.0	-0.7
Lumber and Wood Product (Excluding Furniture)	8.7	8.7	8.6	+0.0	+0.1
All Other Durable Goods	21.8	22.1	22.3	-0.3	-0.5
Nondurable Goods	43.3	43.4	41.7	-0.1	+1.6
Food and Kindred Products	9.5	9.5	9.1	+0.0	+0.4
Apparel	4.5	4.6	4.7	-0.1	-0.2
Printing and Publishing	16.4	16.3	16.2	+0.1	+0.2
All Other Nondurable Goods	12.9	13.0	11.7	-0.1	+1.2
Mining and Quarrying	12.0	12.1	11.7	-0.1	+0.3
Copper Mining	8.9	9.0	8.7	-0.1	+0.2
Other Mining and Quarrying	3.1	3.1	3.0	+0.0	+0.1
Construction	94.5	95.8	99.1	-1.3	-4.6
Trans., Communications, & Public Utilities	73.4	73.0	74.1	+0.4	-0.7
Transportation	37.3	37.0	37.5	+0.3	-0.2
Communications and Public Utilities	36.1	36.0	36.6	+0.1	-0.5
Trade	353.5	347.5	347.1	+6.0	+6.4
Wholesale Trade	69.4	68.8	69.1	+0.6	+0.3
Retail Trade	284.1	278.7	278.0	+5.4	+6.1
General Merchandise and Apparel	46.3	43.6	47.1	+2.7	-0.8
Food Stores	47.1	46.5	45.2	+0.6	+1.9
Automotive and Service Stations	33.4	33.3	32.4	+0.1	+1.0
Eating and Drinking Places	99.7	98.8	96.5	+0.9	+3.2
Other Retail Trade	57.6	56.5	56.8	+1.1	+0.8
Finance, Insurance, and Real Estate	90.9	91.4	95.4	-0.5	-4.5
Services and Miscellaneous	358.3	358.1	351.8	+0.2	+6.5
Hotels and Other Lodging Places	41.0	40.7	37.6	+0.3	+3.4
Business Services	75.8	75.8	76.7	+0.0	-0.9
Health Services	91.1	91.0	88.3	+0.1	+2.8
Other Services	150.4	150.6	149.2	-0.2	+1.2
Government	257.9	254.3	249.9	+3.6	+8.0
Federal	43.6	43.5	43.3	+0.1	+0.3
State and Local	214.3	210.8	206.6	+3.5	+7.7
School	125.5	123.4	122.9	2.1	+2.6

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

November 1988 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
Nov.* 1988	Oct. 1988	Nov. 1987	Oct.- Nov.	1987- 1988	Nov.* 1988	Oct. 1988	Nov. 1987	Oct.- Nov.	1987- 1988
1078.7	1061.2	1015.7	+17.5	+63.0	331.3	326.5	313.6	+4.8	+17.7
60.0	61.4	49.7	-1.4	+10.3	18.3	18.6	15.3	-0.3	+3.0
5.6	5.8	4.9	---	---	5.5	5.7	4.9	---	---
5.7	5.9	5.0	---	---	5.6	5.8	4.8	---	---
1018.7	999.8	966.0	+18.9	+52.7	313.0	307.9	298.3	+5.1	+14.7

Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

937.8	932.6	933.3	+5.2	+4.5	251.9	251.0	250.0	+0.9	+1.9
137.9	138.5	136.8	-0.6	+1.1	29.7	30.1	30.9	-0.4	-1.2
107.5	107.9	107.4	-0.4	+0.1	23.9	24.4	25.4	-0.5	-1.5
4.8	4.9	5.0	-0.1	-0.2					
11.0	11.0	10.8	+0.0	+0.2					
51.8	52.0	51.7	-0.2	+0.1					
39.9	40.0	39.9	-0.1	+0.0					
30.4	30.6	29.4	-0.2	+1.0	5.8	5.7	5.5	+0.1	+0.3
6.3	6.2	6.1	+0.1	+0.2					
3.5	3.6	3.5	-0.1	+0.0					
11.4	11.4	11.5	+0.0	-0.1					
9.2	9.4	8.3	-0.2	+0.9					
0.7	0.7	0.6	+0.0	+0.1	1.8	1.8	1.6	+0.0	+0.2
63.4	64.0	66.3	-0.6	-2.9	18.2	18.5	19.4	-0.3	-1.2
50.7	50.5	50.9	+0.2	-0.2	9.4	9.3	9.7	+0.1	-0.3
27.3	27.0	26.9	+0.3	+0.4	4.5	4.5	4.9	+0.0	-0.4
23.4	23.5	24.0	-0.1	-0.6	4.9	4.8	4.8	+0.1	+0.1
238.2	233.8	235.0	+4.4	+3.2	58.6	57.7	57.0	+0.9	+1.6
54.8	54.4	54.2	+0.4	+0.6	8.1	8.2	8.1	-0.1	+0.0
183.4	179.4	180.8	+4.0	+2.6	50.5	49.5	48.9	+1.0	+1.6
29.0	27.1	30.7	+1.9	-1.7	8.0	7.5	8.3	+0.5	-0.3
30.4	29.9	29.1	+0.5	+1.3	7.9	7.8	7.4	+0.1	+0.5
20.7	20.6	19.9	+0.1	+0.8	5.7	5.8	5.5	-0.1	+0.2
64.2	63.5	62.0	+0.7	+2.2	18.4	18.2	17.7	+0.2	+0.7
39.1	38.3	39.1	+0.8	+0.0	10.5	10.2	10.0	+0.3	+0.5
72.2	72.7	75.6	-0.5	-3.4	12.1	12.1	12.6	+0.0	-0.5
241.1	241.0	236.8	+0.1	+4.3	67.4	67.5	66.4	-0.1	+1.0
24.1	23.6	21.2	+0.5	+2.9	6.9	6.9	6.9	+0.0	+0.0
60.0	60.1	61.4	-0.1	-1.4	11.2	11.1	11.1	+0.1	+0.1
59.7	59.9	58.0	-0.2	+1.7	19.3	19.3	18.7	+0.0	+0.6
97.3	97.4	96.2	-0.1	+1.1	30.0	30.2	29.7	-0.2	+0.3
133.6	131.4	131.3	+2.2	+2.3	54.7	54.0	52.4	+0.7	+2.3

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
November 1988

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	15,725	34,050	42,300	12,525	8,475	3,000	5,175
Total Unemployment	2,875	2,850	3,825	1,500	900	300	500
Rate	18.3%	8.4%	9.0%	12.0%	10.6%	10.0%	9.7%
Rate (Seas. Adj.)**	18.3%	8.7%	9.1%	12.3%	10.4%	10.2%	8.6%
Total Employment	12,850	31,200	38,475	11,025	7,575	2,700	4,675

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	15,275	23,975	37,825	10,400	5000	2,850	3,400
Manufacturing	825	1,250	2,900	1,300	225	75	325
Mining & Quarrying	25	100	175	1,375	0	1,600	50
Construction	1,025	1,200	1,725	575	200	200	175
T.C.P.U.	1,925	1,600	2,500	375	150	50	75
Trade	1,600	5,275	9,300	2,400	1,600	225	1,100
F.I.R.E.	325	675	775	275	100	25	100
Services & Misc.	4,525	4,500	10,450	1,850	900	125	800
Government	5,025	9,375	10,000	2,250	1,825	550	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	31,450	27,250	36,375	10,525	36,625	47,625
Total Unemployment	2,200	3,700	3,625	2,200	2,200	15,650
Rate	7.0%	13.6%	10.0%	20.9%	6.0%	32.9%
Rate (Seas. Adj.)**	7.2%	13.3%	9.3%	17.7%	6.3%	26.3%
Total Employment	29,250	23,550	32,750	8,325	34,425	31,975

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	21,850	20,425	28,050	8,700	24,600	24,175
Manufacturing	3,050	1,950	3,775	1,250	2,325	1,675
Mining & Quarrying	325	1,175	3,950	0	975	100
Construction	1,700	1,150	1,375	325	2,300	1,400
T.C.P.U.	1,275	1,800	900	500	825	1,100
Trade	6,300	4,125	5,125	3,375	6,725	7,175
F.I.R.E.	925	375	775	375	975	875
Services & Misc.	4,850	5,250	3,950	1,375	5,625	5,700
Government	3,425	4,600	8,200	1,500	4,850	6,150

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Nov.* 1988	Oct. 1988	Nov. 1987	Nov.* 1988	Oct. 1988	Nov. 1987	Nov.* 1988	Oct. 1988	Nov. 1987
Manufacturing	411.76	405.14	404.19	41.3	40.8	40.5	9.97	9.93	9.98
Aircraft & Missiles	INA	INA	567.23	INA	INA	43.7	INA	INA	12.98
Food & Kindred Prod.	328.78	325.54	367.34	39.9	39.7	40.5	8.24	8.20	9.07
Primary Metals	509.33	511.73	461.03	39.3	39.7	37.3	12.96	12.89	12.36
Machinery	413.10	404.81	391.22	40.7	40.2	39.2	10.15	10.07	9.98
Copper Mining	530.82	537.42	497.35	41.6	41.5	40.8	12.76	12.95	12.19
Construction	417.56	411.09	421.94	36.5	35.5	36.5	11.44	11.58	11.56
Utilities	634.82	654.80	637.69	41.6	42.3	43.0	15.26	15.48	14.83
Retail Trade**	239.99	245.25	242.03	32.3	32.7	32.1	7.43	7.50	7.54
Wholesale Trade	373.23	384.52	399.12	39.0	39.6	39.4	9.57	9.71	10.13

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Nov.* 1988	Oct. 1988	Nov. 1987	Nov.* 1988	Oct. 1988	Nov. 1987	Nov.* 1988	Oct. 1988	Nov. 1987
Manufacturing	444.16	428.86	434.89	42.1	41.0	41.3	10.55	10.46	10.53
Construction	442.62	426.36	434.40	36.4	35.5	36.2	12.16	12.01	12.00
Retail Trade**	262.87	270.68	269.10	32.9	33.5	33.1	7.99	8.08	8.13
Wholesale Trade	394.81	404.40	405.97	39.6	40.0	39.3	9.97	10.11	10.33

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Nov.* 1988	Oct. 1988	Nov. 1987	Nov.* 1988	Oct. 1988	Nov. 1987	Nov.* 1988	Oct. 1988	Nov. 1987
Manufacturing	373.28	380.56	364.72	39.5	39.6	38.8	9.45	9.61	9.40
Copper Mining	597.97	609.44	532.90	43.3	43.5	41.6	13.81	14.01	12.81
Construction	386.08	369.96	382.58	36.7	36.2	37.0	10.52	10.22	10.34
Utilities	580.97	578.10	574.98	41.0	41.5	42.0	14.17	13.93	13.69

* Preliminary
** Excludes eating and drinking places.

NOTE: These estimates are based on a sample of full-time and part-time production and related employees whose payroll and hours are reported for the pay period that includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
November 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,748,358	1,634,115	114,243	6.5%
Apache	15,784	13,415	2,369	15.0
Cochise	36,720	33,609	3,111	8.5
Coconino	44,731	40,872	3,859	8.6
Gila	13,722	11,997	1,725	12.6
Graham	9,350	8,479	871	9.3
Greenlee	3,223	2,931	292	9.1
La Paz	5,409	4,858	551	10.2
Maricopa	1,078,703	1,018,738	59,965	5.6
Mohave	33,641	31,308	2,333	6.9
Navajo	28,023	24,572	3,451	12.3
Pima	331,335	313,047	18,288	5.5
Pinal	41,130	37,260	3,870	9.4
Santa Cruz	11,206	9,277	1,929	17.2
Yavapai	38,724	36,253	2,471	6.4
Yuma	56,655	47,498	9,157	16.2

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in November

(Continued from Page 7)

1,000 jobs was larger than expected. Job losses were concentrated in high tech, machinery, and other durable goods sectors. Over the past 12 months, Manufacturing employment increased at a meager rate of 0.2 percent, an addition of only 400 jobs.

The performance of the remaining industries was influenced primarily by seasonal factors. Transportation, Communications, and Public Utilities (TCPU) added 400 more employees in November. Most of this increase resulted from Transportation gearing up for the holiday rush. In the Services sector, hotel and lodging employment grew by 300 as staffs were expanded to handle the inflow of winter visitors. Mining and Quarrying employment fell by 100 but still maintains a 2.6 percent rate of growth over the past 12 months.

As the year wound to a close, it was obvious that Arizona's economic performance in 1988 was the weakest since 1982. Total wage-and-salary growth did not likely exceed 2.0 percent, and the economy's sluggishness will continue into 1989 based on a variety of factors. Among these are the slowdown in the national economy, growing inflationary expectations, the continuation of the correction phase in Construction, and the slowing of migration to the state.

--Rosemary Reardon

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported from these sources.

MANUFACTURING - Workers at **McDonnell Douglas Helicopter Co.'s** plant in Mesa heard good and bad news in December. Early in the month the company announced it will produce a multipurpose, twin-engine helicopter for commercial use beginning in late 1990. Called the MDX, the helicopter is expected to generate annual sales of $100 million and lead to employment of 500 people at the company's Falcon Field operation by the mid-1990s. On the down side, 100 McDonnell Douglas contract workers, primarily at the Mesa plant, were laid off due to slow sales.

Motorola Inc. has reopened a previously closed plant in Mesa that will make computer-memory chips and is expected to employ 300 people by mid-1989. Renovated at a cost of $100 million, the facility presently employs 150 workers and is projected to generate around $200 million in products annually. The highly automated plant is a joint venture between Motorola and Toshiba Corp.

Edgcore Technology Inc., a Scottsdale-based manufacturer of supermicrocomputers, has laid off 20 employees due to a slump in sales and the moving of production of Edge 2000 computers from Scottsdale to Austin, Texas. Edgcore, which still manufactures its Edge 1000 computers at its Scottsdale Airpark facilities, now employs 140.

Union Carbide Corp. is awaiting approval from the state Department of Environmental Quality and other agencies to build a specialty-gases plant at the Kingman Airport Industrial Airpark. The $8-$10 million plant would initially employ 10 to 12 people, but may eventually employ three times that many workers. Construction of the 25,000-square-foot facility on a 36-acre site could begin as early as this month.

CONSTRUCTION - Negotiations are under way between the city of **Chandler** and **Bay Plaza Development Co.** to build a proposed $46 million, 11-acre redevelopment project in the city's downtown. A Valley National Bank regional office would anchor the first phase -- a six-story, 100,000-square-foot building, and a parking facility. Secondary phases will include retail shops, a hotel, exhibition space, theaters, and more parking. The redevelopment site is bordered by Chandler Boulevard, Colorado Street, and Arizona and Commonwealth avenues.

Construction is set to begin early this year on the northwest Valley's first high-rise -- a 13-story, 231,000-square-foot building on the southeast corner of the Black Canyon Freeway and Peoria Avenue. **HRA Inc.**, the real estate-development arm of the Hartford Insurance Group, is funding the project, which will eventually include a second office tower, and a pavilion with health club and retail shops.

SunCor Development Co. has announced plans to build a $165 million, 145-acre auto mall in Tempe. The project, called Autoplex, will feature space for 15 to 20 auto dealerships ranging in size from 2 to 20 acres. SunCor, a subsidiary of Pinnacle West Corp., plans to build the basic framework of the project and sell finished lots to dealers. The project, to be located near Elliot Road

(Continued on Page 14)

and the Maricopa Freeway, is part of a 428-acre development which is also expected to include a 450,000-square-foot shopping center.

TRANSPORTATION, COMMUNICATIONS and PUBLIC UTILITIES - **America West Airlines**, based in Phoenix, has ordered 25 jetliners and taken options on 25 additional aircraft. The purchase of 15 Boeing 737-300s and 10 Boeing 757s is a continuation of a plan to modernize the airline's fleet, a company spokesman says. The initial order will cost around $800 million.

USAir has increased threefold the number of its gates in Terminal 2 at Sky Harbor International Airport. The Pittsburgh-based air carrier spent $9 million to add six gates and a VIP club. Although USAir, which recently merged with Piedmont Airlines, has not said whether it eventually plans to make Phoenix a hub, it recently added more flights to California from the Valley.

Cargo-carrier **AmeriJet International Inc.** is expanding its operations at Sky Harbor with an eye toward Mexico. The Ft. Lauderdale company was expected to begin in December twice-a-week, air-freight service between Phoenix and Guadalajara, Jalisco, a major area for American electronics-assembly plants in west-central Mexico. AmeriJet already flies between Phoenix and the West Coast, and provides nightly service to Fort Wayne, Ind., for Burlington Air Express.

Marriott In-Flite Services has moved into the first section of its new facilities at the Phoenix Sky Harbor Center on 24th Street west of the airport. Currently, 150 employees work in Marriott's new 52,000-square-foot building, with 125 more expected to occupy a 58,000-square-foot building when the second phase of the plant is completed in September. Marriott, which prepares 5,000 to 15,000 passenger meals a day in Phoenix, projects Sky Harbor air traffic to triple by the year 2000.

An all-business news radio station took to the Phoenix air waves in December. **KFNN** (1510 AM), formerly KJAA, operates from sunrise to sunset with 60-minute reports provided mainly from the Colorado-based Business Radio Network. The station, which has seven full-time employees and can be heard within a 100-mile radius of Phoenix, eventually anticipates broadcasting 24 hours a day.

TRADE - **Federated Group**, which operates home entertainment and electronics superstores, plans to aggresively expand in Arizona. Purchased by computer and electronic-games manufacturer Atari, Federated recently opened a regional warehouse in Mesa and expects to add four stores (to its existing five) in the state during the next 10 months. The new stores (three in the Valley, one in Tucson) will add 300 workers to the chain's Arizona payroll.

One of California's fastest-growing clothing chains, **Wet Seal**, had good reviews (and sales) during Christmas at its first out-of-state outlet -- in the Paradise Valley Mall. Wet Seal, which specializes in "high-tech" junior fashions, plans to open seven or eight stores in the Valley within the next two years.

Egghead Discount Software, which operates 170 computer software stores in the United States and Canada, has opened its first Arizona outlet at 10209 N. 35th Ave. in Phoenix. The company specializes in IBM, Macintosh and Apple II software.

FINANCE, INSURANCE and REAL ESTATE - Two of Arizona's major financial and real estate-development institutions -- **American Continental Corp.** and **Western Savings and Loan Association** -- are experiencing tough times due to the downturn of con-

(Continued on Page [illegible]

struction and real estate in the state. Phoenix-based American Continental is reportedly in the process of laying off as many as 500 employees -- one-third to one-quarter of its staff -- due to corporate restructuring and sale of Lincoln Savings and Loan Association in Irvine, Calif. Most of the initial layoffs are in the real estate division at the company's headquarters and will affect management and secretarial positions. With the sale of Lincoln Savings, American Continental let go much of its real estate holdings, including its planned community of Estrella in Goodyear. The company says it plans to concentrate on its hotel properties, which employ 1,000 of American Continental's 3,000 workers. Western Savings, the state's largest savings and loan association, has been under close scrutiny by the Federal Home Loan Bank Board because of large real estate losses and a cash squeeze. In addition to a depressed real estate market, Western Savings has been hurt by poor loans and investments. John and Gary Driggs, who ran the company the past 20 years, resigned in December.

Federal and state regulators have given approval to the merger of **Scottscom Bank** and Phoenix-based **Thunderbird Bank**. The merged institution, Thunderbird Bank, has 17 offices in the Valley and is the sixth largest bank in Arizona.

First Wisconsin Corp. of Milwaukee, Wis., has announced its intention to acquire **Metro Bankcorp Inc.**, parent company of Metropolitan Bank of Phoenix. First Wisconsin has assets of 7.5 billion, while Metropolitan Bank, with two offices in Phoenix, has assets of approximately $55 million.

SERVICES and MISCELLANEOUS - While the real estate and financial services sectors of the state are experiencing difficulty, the **Arizona tourism industry** appears to be healthy, particularly in Tucson. Visitors are up 7 percent and profits up 25 percent at Tucson's north-side resorts. An estimated 285,000 people attended 700 meetings and conventions in the Old Pueblo in 1988, bringing in about $1.5 billion to the local economy. While the going is good, Wolfswinkel Group of Mesa and Hawaiian-based developer Christopher Hemmeter are nearing a joint-venture agreement to build a $500 million resort north of Tucson, in Oro Valley. The project would include three hotels, residential and commerical development, and a 2.5-mile Formula 1 race track.

The **Orange Tree Golf and Conference Resort** in Scottsdale, a 160-room resort at 56th Street and Shea Boulevard, is expected to be finished and fully open by the end of the month. The $25 million resort, which caters to vacationing golfers, and business groups of 100 or less, features 14,000 square feet of conference space, a 5,000-square-foot ballroom, sports lounge and restaurant.

The **Doubletree Hotel at Scottsdale Mall** has been sold to the partnership of Heller-White Hotels of Phoenix. Built in 1975 and one of the first Doubletree properties, the sale leaves the Arizona-based chain with 30 resorts, including the Doubletree Suites at Gateway Center in Phoenix, and the Doubletree Hotel and Resort in Tucson. No management changes are anticipated.

GENERAL - **Business failures** in Arizona rose about 80 percent during the first nine months of 1988, compared to a 6.3 percent decline nationally. Dun and Bradstreet Corp. reported that a total of 1,076 businesses failed from January through September, compared to 596 a year earlier. Arizona's soft economy and a large number of business starts between 1985 and 1987 are blamed for the high attrition rate.

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XIII No. 2
February 1989

Unemployment Rate

Seasonally Adjusted
December*

ARIZONA	6.8%
Maricopa County	5.7%
Pima County	5.5%
UNITED STATES	5.3%

Consumer Price Index

U.S. - December 1988
Base = 1982-84

Wage Earner/Clerical Worker	119.2
% Chg. Year Ago	4.4
All Urban	120.5
% Chg. Year Ago	4.4

Phoenix - 4th Qtr 1988
Base = 1982-84

All Urban	122.5
% Chg. Year Ago	5.1

Tucson - 4th Qtr 1988
Base = 1982-84

All Urban	124.3
% Chg. Year Ago	3.2

* Preliminary

In the February Issue:

Pima County Workers Gain on Northern Counterparts, '88 Wage Survey Shows 2

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LABOR MARKET INFORMATION
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005-6123
(602) 542-3871

Brent Fine, Editor
Linda Van Calcar, Word Processor

DES Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Pima County Workers Gain on Northern Counterparts, '88 Wage Survey Shows

Each August, the Arizona Department of Economic Security, Research Administration, sends out questionnaires to small employers (fewer than 100 workers) in Maricopa and Pima counties to determine hourly wages for occupations in a cross-section of industries. The results are then tabulated to determine the low, high and weighted-average wages for each occupation (with sufficient survey responses) and published in separate yearly reports for both counties.

The small-employer wage survey, which began in 1977, is particularly significant because small employers make up 97 percent of businesses in Arizona -- 77,367 out of 79,441 as of March 1988 -- and about 55 percent of the wage and salary employment. Since it started, the survey's industrial and occupational groups, and the methodology used have remained the same, while the list of occupations canvassed has grown.

Who Uses Wage Data?

To name a few groups — employers, employees, government officials, and private developers. Business owners use wage data to plan budgets or determine the economic feasibility of starting or expanding a business. Wage data are also valuable to someone deciding on a future occupation, making a career change, or contemplating moving to a specific area. In addition, hourly earnings are used by parties involved in Workers' Compensation cases to determine awards, and by contract bidders and federal officials to calculate costs for construction projects.

Occupations from the following major industry groups are represented in the survey: Construction; Manufacturing; Transportation, Communications, and Public Utilities (TCPU); Wholesale Trade; Retail Trade; Finance, Insurance, and Real Estate (FIRE); and Services. Within each industry group, occupations are classified under the following categories: managerial, professional, technical, service, maintenance and production, clerical, and sales. Where an occupation falls into more than one industry, averages in each industry are combined to determine an all-industry average, which is provided in a separate section in the report.

Since the survey began, results have shown that a worker usually makes higher wages in Maricopa County. (See, "Why Do Maricopa County Workers Make More Money?", page 5). And the August 1988 survey was no exception, with an average hourly wage in Maricopa County at $9.60 compared to $8.86 in Pima County.

In the past 11 years, wages in the occupational categories of managerial, professional, and technical have averaged 5 to 20 percent higher in Maricopa County than Pima County. Clerical occupations have shown slightly lower disparities in total average wages, coming out 5 to 15 percent higher in Maricopa County. Only in the occupational groups of services, and maintenance and production have the counties' average wages been relatively close, with Pima County lower by 5 to 10 percent.

The news isn't all bad, however, for small business employees in Pima County. In terms of annual percentage growth during the past 12 months, Pima County outpaced its northern counterpart. The overall average wage in Pima County increased 6.4 percent from August 1987

(Continued on Page 3)

to August 1988, compared to a 4.3 percent rise in Maricopa County.

This was the first time since 1984 that average wages in Pima County recorded a larger yearly increase than in Maricopa County. Since 1980, small businesses in Maricopa County have shown a yearly wage increase of 5.1 percent to Pima County's 4.1 percent.

Out of 5,388 surveys sent to small employers in Maricopa County last August, 1,061 were returned, or 20 percent. The response in Pima County was slightly better, with 415 returned out of 1,837 mailed out, or 23 percent. Both response rates indicate representative samples and are in line with Research Administration (RA) wage surveys of small employers during the last decade.

(For information on how the survey is conducted, see "Everything You Always Wanted to Know -- About Wages in Maricopa and Pima Counties," Arizona Labor Market Information Newsletter, November 1987, pp 1-10.)

Following are brief overviews of each occupational category's results, with tables showing weighted-average hourly wages for selected occupations. Also provided (on page 5) are tables showing average wages and percent changes from the previous survey year in each industry group and occupational category.

MANAGERIAL

In only two of 19 managerial occupations surveyed -- hotel/motel manager and manager trainee -- both in the Services industry, did Pima County record higher average-wage levels in August 1988.

But survey results show the disparity in weighted-average wages for managerial occupations at a historically low level between the two counties -- 10.8 percent higher in Maricopa County. For the survey year, wage levels in the managerial occupation group increased 8.5 percent in Maricopa County and 10.1 percent in Pima County, helping Pima County close the gap slightly in average wages.

	Maricopa	Pima
Branch Manager	$21.05	$19.20
Construction Superintendent	16.17	15.33
Controller	17.19	15.87
Office Manager	12.17	11.94
Plant (General) Manager	19.34	18.33
Production Supervisor	12.08	10.53
Restaurant/Coffee Shop Mgr.	8.47	7.66
Retail Store Manager	9.55	9.51
Sales Manager	17.74	12.88
Service Manager	11.81	9.78
Warehouse Supervisor	10.02	9.41

PROFESSIONAL

Of 13 professional occupations surveyed, average-wage levels were 7.4 percent higher in Maricopa County. Pima County, though, did record higher average-wage rates in five occupations -- counselor, licensed practical nurse, loan officer, registered nurse, and training specialist. For the survey year, average wages for professional occupations increased 9.7 percent in Maricopa County and 6.8 percent in Pima County.

	Maricopa	Pima
Accountant	$12.44	$11.79
Buyer	13.72	9.22
EDP Systems Analyst	15.97	12.82
Electronic Engineer	18.76	13.34
Loan Officer	10.84	10.88
Mechanical Engineer	16.05	14.81
Purchasing Officer	12.39	10.46
Registered Nurse	13.61	18.10

TECHNICAL

The highest average-wage levels for certain technical occupations (primarily in the medical field) have

(Continued on Page 4)

seesawed between Pima and Maricopa counties over the years. But Maricopa County has always had a greater overall average-wage rate in this occupational group, as was the case in August when its average-wage level was 12.9 percent higher. For the year ending August 1988, the technical group of occupations' average-wage level increased 9.7 percent in Maricopa County, while Pima County's recorded no change.

	Maricopa	Pima
Drafter (Draftsman)	$11.05	$ 9.46
Electronic Technician	12.14	10.30
Estimator	15.30	13.04
Laboratory Tester	9.49	10.65

SERVICE

Average-wage levels for service occupations -- mainly in the food sector -- were 2.7 percent higher in Maricopa County. However, Pima County outpaced its neighbor to the north the past 12 months, showing a 5.1 percent gain in average-wage rates to Maricopa County's 0.8 percent increase. Four of 12 service occupations in Pima County had higher average-wage rates.

	Maricopa	Pima
Bartender	$4.05	$4.45
Chef	9.16	9.52
Cook	5.37	5.23
Host/Hostess	4.45	5.04
Housekeeping Cleaner	4.16	4.15
Kitchen Helper	3.97	3.87
Waiter/Waitress	2.69	2.62

MAINTENANCE AND PRODUCTION

Average wages in Maricopa County were 8.8 percent higher than in Pima County in the maintenance and production occupational group in August 1988. Pima County, however, made up some ground from the August 1987 survey, recording a 3.4 percent increase to Maricopa County's meager rise of 0.1 percent. And 13 of the 44 occupations in this group surveyed last August were paid higher average wages in Pima County.

	Maricopa	Pima
Auto Mechanic	$10.47	$ 8.17
Bulldozer Operator	13.86	10.92
Carpenter	12.63	9.67
Custodial Worker	5.45	6.20
Diesel Mechanic, Heavy	12.88	9.31
EDP Computer Operator	9.20	8.38
Electrician	10.32	12.11
Electronics Assembler	5.78	4.41
General Laborer	7.80	6.34
Groundskeeper	5.59	6.16
Inspector	8.70	8.03
Machinist	10.69	9.06
Material Handler	6.28	6.45
Nursing Assistant	5.21	5.59
Printing Press Operator	8.86	9.15
Sales Route Driver	6.83	6.38
Sheet Metal Worker	8.49	9.92
Tool and Die Maker	12.28	8.56
Truck Driver, Light	6.63	6.40

CLERICAL

Maricopa County dominated the 25 clerical occupations surveyed, with higher average wages in all but two jobs -- collector-bill/account and production clerk. This advantage is reflected in Maricopa County's 11.7 percent higher average wages in the clerical field. However, Pima County did close the gap somewhat for the year, recording a 5.8 percent wage-rate increase compared to a 4.9 percent gain for Maricopa County.

	Maricopa	Pima
Accounting Clerk	$ 7.71	$ 6.75
Clerk	6.63	5.78
EDP Keypunch Operator	6.90	6.83
Executive Secretary	10.49	9.90
Order Clerk	7.31	6.93
Payroll Clerk	7.96	7.14
Receptionist	6.07	5.75
Secretary	7.93	7.11
Shipping and Receiving Clerk	7.35	5.83
Switchboard Operator	6.64	5.33
Word Processing Machine Operator	8.29	7.70

(Continued on Page 6)

Why Do Maricopa County Workers Make More Money?

Why does Maricopa County have higher wage levels than Pima County in a vast majority of occupations?

First, Maricopa County has a larger manufacturing base than Pima County. Maricopa County's manufacturing employment -- primarily from electronic and aerospace businesses -- in August 1988 was 17.3 percent of its total nonagricultural work force, while Pima County's was 15.5 percent. Also, the manufacturing industry, with its union background, has historically paid higher wages and required higher-skilled occupations.

Pima County, on the other hand, is more dependent on two lower-waged industrial sectors -- services and retail trade. In August 1988 these segments numbered 58.7 percent of Pima County's total employment, compared to 52.2 percent of Maricopa County's work force.

Another reason for the difference in wages between Maricopa and Pima counties is that in the last decade Maricopa County has become the home base for many financial services and manufacturing companies, bringing with them their higher-waged personnel. And a side benefit from this is that higher wages at the top of the occupational ladder will tend to pull up the wage levels of occupations below it.

Also contributing to higher wages in Maricopa County is a higher cost of living, particularly in the housing sector. According to the ACCRA (American Chamber of Commerce Researchers Association) Cost of Living Index, which measures relative price levels for consumer goods and services, the city of Phoenix (in Maricopa County) was 4.1 percent more expensive to live in than the city of Tucson (in Pima County) in the third quarter of 1987.

For a more detailed analysis of the two counties' industrial and occupational makeup, see "Everything You Always Wanted to Know -- About Wages in Maricopa and Pima Counties," Arizona Labor Market Information Newsletter, November 1987, pp. 1-10.

AVERAGE HOURLY WAGES BY OCCUPATION - AUGUST 1988

	Maricopa County		Pima County	
	Average	Pct. Change	Average	Pct. Change
Managerial	$14.19	+8.5	$12.81	+10.1
Professional	14.05	+9.7	13.08	+6.8
Technical	11.72	+9.7	10.38	0.0
Service	4.97	+0.8	4.84	+5.1
Maintenance and Production	8.42	-0.1	7.74	+3.4
Clerical	7.52	+4.9	6.73	5.8
Overall	9.60	+4.3	8.86	+6.4

AVERAGE HOURLY WAGES BY INDUSTRY - AUGUST 1988

	Maricopa County		Pima County	
	Average	Pct. Change	Average	Pct. Change
Construction	$11.82	+4.7	$10.39	-3.4
Manufacturing	10.38	+5.2	9.03	-1.0
Trans., Comm., and Public Utilities	8.60	-2.0	9.33	+7.2
Wholesale Trade	9.82	+3.1	9.11	+10.4
Retail Trade	7.79	+6.4	6.45	+2.2
Finance, Insurance, and Real Estate	10.67	+4.2	9.91	+12.8
Services	8.38	+1.9	8.04	+8.7

SALES

This category showed some surprising results. Of the five occupations included in the wage survey, only one -- general salesperson -- had a higher average wage in Maricopa County. Average wages for the remaining occupations -- insurance sales agent, parts counter person, real estate agent, and sales clerk -- were higher in Pima County.

	Maricopa	Pima
General Salesperson	$ 9.50	$ 9.02
Insurance Sales Agent	15.08	22.43
Parts Counter Person	7.58	7.85
Real Estate Sales Agent	10.39	12.04
Sales Agent	5.21	5.57

(A free copy of data from the small-employer wage survey is available by calling the Department of Economic Security, Research Administration, at (602) 542-3871, or writing to the address located on the back of the newsletter. Publications with analysis and occupational definitions will be available in a few months.)

-- Glede Kohler

Film, Fact Sheet Focus on Women in Workplace

Breaking down stereotypes of working women, and the employment outlook for women by the year 2000 are topics of a recently released U.S. Department of Labor documentary film and fact sheet.

Put together by the Department of Labor's Women's Bureau, the film, "There's No Such Thing as Women's Work," traces the history of working women in America, from the Colonial period to present day. In addition, the documentary narrated by ABC news correspondent Carole Simpson, deals with employers' changing attitudes on child care, safety and health issues, and women's and children's protective labor laws.

The fact sheet, "Women and Workforce 2000," discusses demographic changes expected in the workforce in the next decade and how that will affect women, plus it gives an outlook for employment and lists 10 industries expected to generate the largest number of jobs between now and 2000.

The film -- available in 15- and 30-minute versions, and in VHS and ¾-inch videotape formats -- can be loaned out for 10 days. Requests for the film should be submitted in writing to: Women's Bureau, U.S. Department of Labor, Dept. R, 200 Constitution Ave., N.W., Washington, D.C., 20210.

Single copies of "Women and Workforce 2000" are free by writing to the same address.

LMI Publications — Hot off the Press

The following revised publication prepared by Department of Economic Security (DES), Research Administration, can be ordered from the address on the back of this newsletter or by calling (602) 542-3871. One copy will be sent at no charge. Multiple copies are available at a nominal charge to help cover the cost of printing. Other DES offices can order directly from DES Supply.

The latest edition of *Arizona Licensed Occupation Requirements* (PAL-077) lists more than 90 occupations requiring licensing in this state.

The publication provides the licensing agency name, address, and phone number, along with information on exams, fees, education, and other requirements for each occupation. The booklet is primarily designed for job seekers or those who may be planning a career change.

The Arizona Labor Force in December

Arizona's unemployment rate for December held steady at 6.8 percent, while the number of unemployed dropped seasonally by 2,200.

The total number of employed also dipped by 8,400, an unusual event in December. The decrease resulted because Election Day workers were included in November's employment survey. It was the first time since 1960 that presidential election employment has been counted in November's employment estimates.

On average, there has been a 5,500 increase in total employment in December since 1982. This year's artificially high November residence-based employment level masked any normal gains made in the month.

Wage and salary employment also dropped by 5,300 for the same reason. Average gains in December since 1982 have been on the order of 6,700.

Nevertheless, in December, the underlying change in employment by industry continued in a manner similar to the last several months. Construction declined by another 1,000 jobs, bringing the downturn in that industry to a full two-and-a-half years. Finance, Insurance, and Real Estate (FIRE) followed -- dropping by 100 jobs -- and began its second year of decline. Manufacturing, too, dropped another 300, mostly from the high-tech machinery manufacturing sector.

The seasonal industries performed slightly weaker than expected in December. Transportation, Communications, and Public Utilities (TCPU) added 500 jobs, while 900 has been the average December rise since the last recession in 1982.

(Continued on Page 12)

BLS Revises Method for Estimating Employment, Unemployment Rate

Beginning in January, the U.S. Bureau of Labor Statistics (BLS) revised its method for calculating monthly employment and unemployment estimates for 39 states (including Arizona) and the District of Columbia.

The BLS replaced a building-block method with a variable-coefficient regression model approach. It developed the new procedure through analysis of more than 10 years of data, and testing conducted with the assistance of state employment security agencies. The regression models are expected to yield more precise estimates that will automatically adjust to structural changes in each state's economy.

Since 1973, the BLS has been responsible for procedures used by states to generate monthly estimates of the civilian labor force in all states, metropolitan areas, counties, and cities of 25,000 population or more. During that time the BLS has maintained an active research effort to improve the methodological basis of state and area labor force estimates. And in recent years it has focused on a complete redesign of the estimating methodology for states with small sample sizes, to avoid making ad-hoc adjustments.

Labor force estimates for the nation as a whole are produced directly from the Current Population Survey, a scientifically selected sample of households that are representative of the total population. In the 11 most-populated states (California, Florida, Illinois, Massachusetts, Michigan, New Jersey, New York, North Carolina, Ohio, Pennsylvania, and Texas), the CPS sample sizes are large enough to produce reliable estimates and are used as the official employment and unemployment series.

However, in 39 states (referred to as nondirect-use states), with sample sizes too small to support direct development of monthly employment and unemployment estimates, a building-block approach was used to define and estimate components of unem-

(Continued on Page 13)

Arizona Labor Force and Employment

December 1988 (in thousands)

	Arizona				
				Amount Change	
	Dec.* 1988	Nov. 1988	Dec. 1987	Nov.- Dec.	1987- 1988
TOTAL CIVILIAN LABOR FORCE**	1753.8	1764.4	1652.4	-10.6	+101.4
Total Unemployment	114.0	116.2	95.2	-2.2	+18.8
Rate	6.5	6.6	5.8	----	----
Rate (Sea. Adj.)***	6.8	6.8	6.0	----	----
Total Employment	1639.8	1648.2	1557.2	-8.4	+82.6

The Above Labor Force Statistics Should N

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Dec.* 1988	Nov. 1988	Dec. 1987	Nov.- Dec.	1987- 1988
TOTAL WAGE AND SALARY	1435.3	1440.6	1423.1	-5.3	+12.2
Manufacturing	188.5	188.8	188.6	-0.3	-0.1
Durable Goods	145.4	145.4	146.6	+0.0	-1.2
Stone, Clay, and Glass	7.3	7.2	7.6	+0.1	-0.3
Primary and Fabricated Metals	16.2	16.2	15.9	+0.0	+0.3
Primary Metals	7.4	7.4	7.2	+0.0	+0.2
Fabricated Metals	8.8	8.8	8.7	+0.0	+0.1
Machinery	65.0	65.2	65.3	-0.2	-0.3
Other Durable Goods	56.9	56.8	57.8	+0.1	-0.9
Aircraft and Missiles	26.3	26.2	26.9	+0.1	-0.6
Lumber and Wood Product (Excluding Furniture)	8.7	8.7	8.5	+0.0	+0.2
All Other Durable Goods	21.9	21.9	22.4	+0.0	-0.5
Nondurable Goods	43.1	43.4	42.0	-0.3	+1.1
Food and Kindred Products	9.5	9.5	9.0	+0.0	+0.5
Apparel	4.7	4.6	4.8	+0.1	-0.1
Printing and Publishing	16.3	16.4	16.2	-0.1	+0.1
All Other Nondurable Goods	12.6	12.9	12.0	-0.3	+0.6
Mining and Quarrying	12.1	12.1	11.7	+0.0	+0.4
Copper Mining	9.0	9.0	8.7	+0.0	+0.3
Other Mining and Quarrying	3.1	3.1	3.0	+0.0	+0.1
Construction	93.7	94.7	97.9	-1.0	-4.2
Trans., Communications, & Public Utilities	74.0	73.5	75.0	+0.5	-1.0
Transportation	37.8	37.4	38.3	+0.4	-0.5
Communications and Public Utilities	36.2	36.1	36.7	+0.1	-0.5
Trade	358.5	353.2	351.2	+5.3	+7.3
Wholesale Trade	70.2	69.6	69.9	+0.6	+0.3
Retail Trade	288.3	283.6	281.3	+4.7	+7.0
General Merchandise and Apparel	48.4	46.2	48.9	+2.2	-0.5
Food Stores	48.2	47.0	45.7	+1.2	+2.5
Automotive and Service Stations	33.6	33.4	32.3	+0.2	+1.3
Eating and Drinking Places	99.9	99.4	97.4	+0.5	+2.5
Other Retail Trade	58.2	57.6	57.0	+0.6	+1.2
Finance, Insurance, and Real Estate	90.8	90.9	95.1	-0.1	-4.3
Services and Miscellaneous	360.3	359.2	353.0	+1.1	+7.3
Hotels and Other Lodging Places	41.0	41.1	37.8	-0.1	+3.2
Business Services	76.8	76.0	77.2	+0.8	-0.4
Health Services	91.5	91.2	88.7	+0.3	+2.8
Other Services	151.0	150.9	149.3	+0.1	+1.7
Government	257.4	268.2	250.6	-10.9	+6.8
Federal	43.6	43.8	43.3	-0.2	+0.3
State and Local	213.8	224.4	207.3	-10.6	+6.5
School	125.1	125.4	124.2	-0.3	+0.9

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

December 1988 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
Dec.* 1988	Nov. 1988	Dec. 1987	Nov.- Dec.	1987- 1988	Dec.* 1988	Nov. 1988	Dec. 1987	Nov.- Dec.	1987- 1988
1078.1	1085.6	1020.7	-7.5	+57.4	333.6	335.0	315.4	-1.4	+18.2
59.1	60.7	50.0	-1.6	+9.1	18.1	18.6	15.2	-0.5	+2.9
5.5	5.6	4.9	---	---	5.4	5.6	4.8	---	---
5.7	5.7	5.1	---	---	5.5	5.6	4.9	---	---
1019.0	1024.9	970.7	-5.9	+48.3	315.5	316.4	300.2	-0.9	+15.3

t Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

940.6	943.0	936.1	-2.4	+4.5	254.8	254.8	251.8	+0.0	+3.0
137.8	138.0	137.3	-0.2	+0.5	29.9	29.8	31.0	+0.1	-1.1
107.6	107.5	107.6	+0.1	+0.0	24.1	24.0	25.5	+0.1	-1.4
4.9	4.8	4.9	+0.1	+0.0					
11.0	11.0	10.8	+0.0	+0.2					
51.6	51.8	51.9	-0.2	-0.3					
40.1	39.9	40.0	+0.2	+0.1					
30.2	30.5	29.7	-0.3	+0.5	5.8	5.8	5.5	+0.0	+0.3
6.2	6.2	6.1	+0.0	+0.1					
3.7	3.6	3.5	+0.1	+0.2					
11.3	11.4	11.5	-0.1	-0.2					
9.0	9.3	8.6	-0.3	+0.4					
0.7	0.7	0.6	+0.0	+0.1	1.9	1.8	1.6	+0.1	+0.3
62.5	63.4	65.4	-0.9	-2.9	18.5	18.3	19.2	+0.2	-0.7
51.2	50.8	51.4	+0.4	-0.2	9.6	9.5	9.8	+0.1	-0.2
27.7	27.4	27.5	+0.3	+0.2	4.7	4.6	4.9	+0.1	-0.2
23.5	23.4	23.9	+0.1	-0.4	4.9	4.9	4.9	+0.0	+0.0
240.9	238.1	236.9	+2.8	+4.0	59.7	58.4	58.1	+1.3	+1.6
55.0	54.8	54.4	+0.2	+0.6	8.2	8.2	8.1	+0.0	+0.1
185.9	183.3	182.5	+2.6	+3.4	51.5	50.2	50.0	+1.3	+1.5
29.9	28.8	31.7	+1.1	-1.8	8.7	8.0	8.7	+0.7	+0.0
31.3	30.3	29.5	+1.0	+1.8	8.0	7.9	7.5	+0.1	+0.5
20.9	20.8	19.8	+0.1	+1.1	5.7	5.7	5.5	+0.0	+0.2
64.4	64.1	62.5	+0.3	+1.9	18.5	18.3	18.1	+0.2	+0.4
39.4	39.3	39.0	+0.1	+0.4	10.6	10.3	10.2	+0.3	+0.4
72.1	72.3	75.3	-0.2	-3.2	12.1	12.0	12.6	+0.1	-0.5
242.6	241.6	237.6	+1.0	+5.0	67.9	67.8	66.7	+0.1	+1.2
24.3	24.1	21.4	+0.2	+2.9	6.8	6.9	7.1	-0.1	-0.3
60.7	60.2	61.9	+0.5	-1.2	11.3	11.2	11.0	+0.1	+0.3
59.9	59.8	58.3	+0.1	+1.6	19.6	19.5	18.9	+0.1	+0.7
97.7	97.5	96.0	+0.2	+1.7	30.2	30.2	29.7	+0.0	+0.5
132.8	138.1	131.6	-5.3	+1.2	55.2	57.2	52.8	-2.0	+2.4

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
December 1988

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	16,200	37,125	44,400	13,725	9,400	3,225	5,250
Total Unemployment	2,850	3,300	4,525	1,850	925	300	525
Rate	17.6%	8.9%	10.2%	13.5%	9.8%	9.3%	10.0%
Rate (Seas. Adj.)**	18.3%	9.0%	10.0%	13.3%	10.2%	9.3%	9.9%
Total Employment	13,350	33,825	39,875	11,875	8,475	2,925	4,725

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	15,275	25,625	38,000	10,825	5,625	2,975	3,450
Manufacturing	825	1,200	2,850	1,275	225	75	325
Mining & Quarrying	50	125	150	1,325	0	1,575	75
Construction	825	1,050	1,550	650	200	200	125
T.C.P.U.	2,000	1,650	2,300	375	150	50	75
Trade	1,550	5,625	9,175	2,325	1,625	225	1,150
F.I.R.E.	300	675	750	275	100	25	100
Services & Misc.	4,575	4,575	9,700	1,900	950	125	800
Government	5,150	10,725	11,525	2,700	2,375	700	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	33,600	28,700	41,475	10,875	38,650	59,425
Total Unemployment	2,425	3,850	3,700	1,350	2,825	8,350
Rate	7.2%	13.4%	8.9%	12.4%	7.3%	14.1%
Rate (Seas. Adj.)**	7.2%	13.7%	9.6%	13.5%	6.5%	18.8%
Total Employment	31,175	24,850	37,775	9,525	35,825	51,075

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	22,550	20,475	31,600	9,750	25,100	28,600
Manufacturing	2,900	1,925	3,850	1,300	2,275	1,850
Mining & Quarrying	325	1,175	3,700	0	975	75
Construction	1,875	900	1,450	300	2,100	1,425
T.C.P.U.	1,225	1,900	975	550	850	1,125
Trade	6,525	4,150	5,700	4,150	6,725	8,950
F.I.R.E.	950	375	775	350	975	925
Services & Misc.	4,825	4,575	4,550	1,425	5,475	6,250
Government	3,925	5,475	10,600	1,675	5,725	8,000

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Dec.* 1988	Nov. 1988	Dec. 1987	Dec.* 1988	Nov. 1988	Dec. 1987	Dec.* 1988	Nov. 1988	Dec. 1987
Manufacturing	413.66	410.94	408.12	41.7	41.3	41.1	9.92	9.95	9.93
Aircraft & Missiles	INA	INA	568.71	INA	INA	44.5	INA	INA	12.78
Food & Kindred Prod.	326.58	329.87	366.16	39.3	39.6	39.8	8.31	8.33	9.20
Primary Metals	503.87	509.33	444.22	39.8	39.3	38.0	12.66	12.96	11.69
Machinery	411.26	409.85	414.93	40.8	40.7	40.6	10.08	10.07	10.22
Copper Mining	525.10	530.82	504.71	40.8	41.6	41.1	12.87	12.76	12.28
Construction	420.64	422.67	429.09	36.2	36.5	36.8	11.62	11.58	11.66
Utilities	640.48	632.88	619.07	42.5	41.5	42.2	15.07	15.25	14.67
Retail Trade**	242.22	241.80	244.78	33.0	32.5	32.9	7.34	7.44	7.44
Wholesale Trade	369.72	374.53	390.85	39.0	39.3	39.6	9.48	9.53	9.87

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Dec.* 1988	Nov. 1988	Dec. 1987	Dec.* 1988	Nov. 1988	Dec. 1987	Dec.* 1988	Nov. 1988	Dec. 1987
Manufacturing	439.95	443.10	443.52	42.1	42.0	42.0	10.45	10.55	10.56
Construction	439.56	431.43	445.38	37.0	36.5	36.9	11.88	11.82	12.07
Retail Trade**	267.81	266.40	274.46	33.9	33.3	33.8	7.90	8.00	8.12
Wholesale Trade	391.44	393.22	405.82	39.7	39.8	39.4	9.86	9.88	10.30

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Dec.* 1988	Nov. 1988	Dec. 1987	Dec.* 1988	Nov. 1988	Dec. 1987	Dec.* 1988	Nov. 1988	Dec. 1987
Manufacturing	386.16	378.65	366.70	40.1	39.9	39.6	9.63	9.49	9.26
Copper Mining	578.34	597.97	540.56	42.0	43.3	42.8	13.77	13.81	12.63
Construction	388.07	386.34	376.38	37.1	36.9	36.4	10.46	10.47	10.34
Utilities	584.22	572.05	578.51	41.2	40.6	42.6	14.18	14.09	13.58

* Preliminary
** Excludes eating and drinking places

NOTE: These estimates are based on a sample of full-time and part-time production, and related employees whose payroll and hours are reported for the pay period that includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs December 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,753,831	1,639,835	113,996	6.5%
Apache	16,208	13,351	2,857	17.6
Cochise	37,127	33,823	3,304	8.9
Coconino	44,394	39,863	4,531	10.2
Gila	13,729	11,870	1,859	13.5
Graham	9,400	8,478	922	9.8
Greenlee	3,218	2,917	301	9.4
La Paz	5,259	4,733	526	10.0
Maricopa	1,078,176	1,019,028	59,148	5.5
Mohave	33,619	31,185	2,434	7.2
Navajo	28,699	24,838	3,861	13.5
Pima	333,604	315,549	18,055	5.4
Pinal	41,476	37,785	3,691	8.9
Santa Cruz	10,868	9,524	1,344	12.4
Yavapai	38,639	35,814	2,825	7.3
Yuma	59,414	51,075	8,339	14.0

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in December

(Continued from Page 7)

The transportation component (mostly airlines) had the larger part of the gain (400). Trade added 5,300, only slightly weaker than the expansionary average (5,900). Services came in at 1,000 below the December average gain, adding only 1,100.

Tourism accounts for some of the growth that has occurred in those service-producing industries. But the tourism-related components of TCPU, Trade, and Services (transportation, restaurants and bars, and hotels) grew only 800, while 1,400 has been the average December growth since 1982.

December's Government employment lost 10,800 and was the prime component behind the total wage and salary employment loss. In years when election employment is not counted in November, usual government losses are on the order of 1,500. Most of those losses result from school holiday recesses.

Discussion of this month's over-the-year change has been intentionally avoided. All 1988 employment estimates will be revised next month, when they are benchmarked to available Unemployment Insurance reports. Research Administration will then review over-the-year change as a prelude to its employment forecasts scheduled for release February 28.

--Ron Simon

BLS Revises Method for Estimating Employment, Unemployment Rate

(Continued from Page 7)

ployment and employment. This method used monthly data from the Unemployment Insurance (UI) system and the Current Employment Statistics (CES) program covering nonagricultural payroll employment.

The unemployment estimates, because they were based on data from UI programs that differ from state to state, were not comparable. In order to ensure comparability with other states and nationally, the monthly estimates were adjusted to the CPS in a six-month moving-average relationship.

Once annual average CPS data were available, monthly employment and unemployment estimates for the year were adjusted to those benchmark numbers using a mathematical approach to distribute the difference between the CPS annual average and the average of the estimates prepared by the building-block method.

But the relatively small proportion of total unemployed accounted for by UI claimants, and difficulties in estimating groups not covered by UI, caused the building-block estimates to significantly underestimate CPS levels, particularly the number of unemployed.

The new regression models use two estimating equations for each state; one for employment and one for the unemployment rate.

The employment model uses the CES estimate of nonfarm wage and salary jobs, and data from the CPS on employed persons not included in the CES survey. The latter includes agricultural workers, and self-employed, unpaid-family, and private-household workers.

The unemployment rate model uses data on UI claimants who have no earnings from employment to represent most of the experienced unemployed. An employment-to-population ratio is also incorporated to reflect both the business cycle and the experienced unemployed not covered by the UI data.

In addition, a variable is used to represent unemployed new entrants and re-entrants to the labor force. And in some states, a seasonal-entrant factor is applied to show the labor force increase that occurs at the end of the school year.

Once the data are incorporated in the models for the month, unemployment and labor force estimates are calculated. The unemployment rate is modeled rather than the unemployment level because the rate is usually considered a more meaningful economic measure.

Although the differences between the annual average of the model estimates and the CPS are small, the model estimates will continue to be benchmarked to the CPS annual averages. However, a new benchmarking method will be used that is consistent with the model-based estimation procedure and preserves the original monthly seasonal pattern of the model estimates.

For more information on the changes made, call Research Administration's CES unit, (602) 542-3871, or the BLS in Washington D.C., (202) 523-1158.

CPI Incorrectly Labeled

The U.S. Consumer Price Index (Base = 1982-84) in the January 1989 *Arizona Labor Market Information Newsletter* was incorrectly labeled October 1988. The information given was for the month of November 1988. Following are data for both months:

	October	November
Wage Earner/Clerical Worker	118.9	119.0
% Change Year Ago	4.2	4.1
All Urban	120.2	120.3
% Change Year Ago	4.2	4.2

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported from these sources.

MANUFACTURING - Up to 200 manufacturing and administrative jobs are expected to be eliminated through retirement and attrition at **Honeywell Bull** in Phoenix. The reduction is part of a plan to eliminate 1,600 positions in the United States. The cuts, which should take place in the first quarter of the year, are due in part to a decline in the mainframe computer market, the company said.

Northwest Airlines has contracted with **Honeywell Inc.** (a separate company from Honeywell Bull) of Phoenix to build a collision-warning system for its fleet of aircraft. No terms of the agreement were announced, but it was previously estimated it could cost up to $55 million to equip Northwest's current fleet of 309 planes, and 140 aircraft on order.

Intel Corp. intends to complete construction on a $40 million factory in Chandler, which was only 25 percent finished when work was stopped in 1985 due to a downturn in the semiconductor industry. About 900 employees will move into the facility -- which will be used for assembly and testing of semiconductors -- upon completion in November, but no additional employees are expected to be hired.

Tucson, reeling from the pullout of International Business Machines and layoffs at Hughes Aircraft Co., received some well-deserved good news. ... The relocation of **Weiser Lock Co.** from Huntington Beach, Calif., is expected to create 300 to 400 assembly and other jobs, and may generate an additional 300 to 400 jobs among local suppliers of lock components. Hiring is expected to begin in the next three to six months. ... *The Archives of Internal Medicine*, the third-largest medical journal in the United States, has moved its offices from Boston to Tucson. The American Medical Association publishes the journal, which has a circulation of 115,000. ... Tucson officials are waiting to hear on possible relocation of a California electronics company and an Italian aircraft firm. EECO, Inc. of Santa Ana, Calif., is expected to move part of its operation -- a computer-keyboard unit and support functions for a Mexico unit -- which would initially employ 65 people, but eventually could increase to 200 or more. Tucson representatives, meanwhile, are asking **Piaggio Aviation Inc.** of Italy to set up a U.S. assembly site at the former Learjet manufacturing plant at Tucson International Airport. The plant would be used to build the company's Avanti turboprop planes and could lead to the employment of 600 workers in a few years.

CONSTRUCTION - **Emerald Homes L.P.** has announced plans to build a 5,000-home retirement community in Green Valley, about 50 miles south of Tucson. The 2,000-acre community will feature mainly single-family detached units and include two 18-hole golf courses, a recreation center and commercial development. Construction is expected to begin in June or July.

Plans to build a 7,600-acre master-planned community west of Casa Grande were announced by **The Simmons Co.** of Phoenix. The project, to be known as Cimarron Ranch, will in-

(Continued on Page 15)

clude residential, industrial and commercial development. It will be located within a 38,000-acre site authorized for master planning by the Pinal County Board of Supervisors.

TRADE - A 175,000-square foot shopping center, which will feature a Wal-Mart and Walgreen's, is under construction on Mariposa Road in Nogales. All told, the **Loma Linda Shopping Center** has 12 signed leases with national chains and local merchants.

Goodyear Tire and Rubber Co. has opened a 90,000-square-foot warehouse and distribution center at 4501 W. Polk St. in Phoenix. The facility will replace warehouses in Los Angeles and El Paso, Texas.

A name synonymous with Arizona will bite the dust later this year when the five **Goldwaters** stores in Phoenix take their new name of **Robinson's**. But more important will be the loss of 400 administrative and distribution positions in the Valley. Seventy-five to 80 percent of those affected, however, will be offered other positions by May Department Stores Co., the parent company of Robinson's. May Co. also plans to expand the number of Robinson's outlets in the next few years with a $40 million investment. Two Goldwaters stores in Tucson will be sold to other chains. Many of the Tucson stores' 400 employees will be offered positions or preferential treatment for jobs at two Foley's stores in Tucson, which are owned by May Co.

Montgomery Ward & Co. will open its second Tucson store in March. To be located at 4147 N. Oracle Road, the store will have 102,000 square feet and will feature one of the largest Ward's electronics departments in the country. The store is expected to employ 165 full-time workers.

FINANCE, INSURANCE and REAL ESTATE - **MeraBank** is closing seven more of the 21 Safeway-store branches it acquired from Western Savings and Loan Association. Four of the branches are in Tucson, and one each in Flagstaff, Prescott and Yuma. Twelve of the branches were closed when the original purchase was made.

SERVICES and MISCELLANEOUS - Resumption of rail service between Williams and the Grand Canyon is part of an $85 million project expected to produce 100 jobs initially and 800 more down the tracks, in April 1990, when the **Grand Canyon Railway** begins service. In addition to the train, which stopped service in the late 1960s, a historical theme park in downtown Williams is planned. The railroad and theme park are expected to pump $200 million annually into northern Arizona's economy.

Phoenix has landed an international **Formula One** road race through 1993. The race, held the past seven years in Detroit, will run through downtown streets the first week of June and is expected to bring between $7.5 million and $30 million to the local economy.

GOVERNMENT - Arizona is expected to lose 67 civilian and 783 military jobs due to the reduction and closure of military bases in the state. The planned reductions are part of several recommendations to cut military costs, made in a report by the Defense Secretary's Commission on Base Reassignments. The plan would cut 483 military and 23 civilian jobs at **Davis-Monthan** Air Force Base in Tucson; 300 military and 316 civilian positions at **Fort Huachuca** in Sierra Vista; and five civilian and 100 state jobs at the **Navajo Army Depot** near Flagstaff. The **Yuma Army Proving Ground**, however, would gain 200 civilian jobs from closure of a facility in Indiana.

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XIII No. 3
March 1989

Unemployment Rate

Seasonally Adjusted
January*

ARIZONA	- 5.8%
Maricopa County	- 4.8%
Pima County	- 4.8%
UNITED STATES	- 5.4%

Consumer Price Index

U.S. - January 1989
Base = 1982-84

Wage Earner/Clerical Worker	- 119.7
% Chg. Year Ago	- 4.5
All Urban	- 121.1
% Chg. Year Ago	- 4.7

Phoenix - 4th Qtr 1988
Base = 1982-84

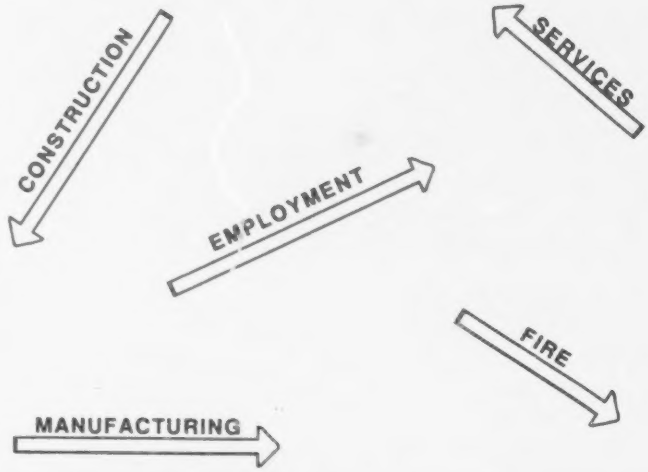
All Urban	- 122.5
% Chg. Year Ago	- 5.1

Tucson - 4th Qtr 1988
Base = 1982-84

All Urban	- 124.3
% Chg. Year Ago	- 3.2

* Preliminary

Annual Forecast



Another year has passed, and with it comes the task of reviewing Arizona's over-the-year economic performance and forecasting what lies in store for 1989 and beyond.

Department of Economic Security, Research Administration, which is charged with this responsibility, annually gauges the state's economic health by measuring two key variables -- number of employed and unemployed.

At the beginning of each year Research Administration updates its Arizona Employment Forecasting Model (AEFM) with revised (benchmarked) employment and unemployment data from the previous two

(Continued on page 5)

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Manufacturing, Construction, FIRE Responsible for State's Sluggish Economy in '88

When evaluating Arizona's economy in 1988, the first area to analyze is the state's unemployment rate, the most widely used measure of economic performance.

Revised figures reveal that Arizona's unemployment rate edged up slightly, from 6.2 percent in 1987 to 6.3 percent in 1988. The small increase in the rate -- which is nearly 1 percent higher than the national average of 5.5 percent -- was primarily due to the continued moderate growth in the state labor force and an anemic increase in wage and salary employment.

Arizona's labor force, however, grew 2.6 percent in 1988 compared to a U.S. increase of 1.5 percent. And total employment (wage and salary employment, plus self-employed, agricultural, unpaid family and household workers; all of whom must reside in Arizona) also increased 2.6 percent last year, but that was down from 1987's rate of 3.3 percent.

Arizona's wage and salary employment grew only 1.8 percent in 1988 compared to 3.6 percent for the nation. Sectors responsible for the flat performance were Manufacturing; Construction; and Finance, Insurance and Real Estate (FIRE).

Sectors that drove the economy primarily involved service-producing industries. These included Services; Trade; and Transportation, Communications, and Public Utilities (TCPU). Also, an overall improvement in Mining helped some of the rural counties to increase their employment base.

In 1988 employment in Manufacturing increased a meager 1.3 percent compared to a U.S. rate of 2.5 percent. Despite the increase in demand for U.S. goods in the global market -- as evidenced by an improvement in the national trade balance and higher employment -- the state did not benefit much from that growth. As a result, Arizona manufacturers did not increase their employment base. Figure 2 shows the growth rate in Manufacturing has been higher in Arizona than the United States since 1981, except for last year.

Construction continued to be the major cause of the state's weak performance. In 1988 construction employment fell 9 percent, continuing a downward trend that began in 1986 when employment increased a meager 0.9 percent, then fell 8.8 percent the following year. The decline in construction jobs was due to the continuation of an excess supply of industrial, retail and multifamily housing space. Figure 1 shows that the U.S. growth rate in construction employment has been higher than Arizona's rate since 1986.

Services, Trade continued strong

Along with Construction, FIRE lost jobs in 1988. Employment in this industry dropped 1.3 percent. On the plus side, Services added 15,900

(Continued on page 4)

LABOR MARKET INFORMATION
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005-6123
(602) 542-3871

Brent Fine, Editor
Linda Van Calcar, Word Processor

Figure 1

Arizona vs. United States
Construction Employment
Growth Rates (1981-1990)

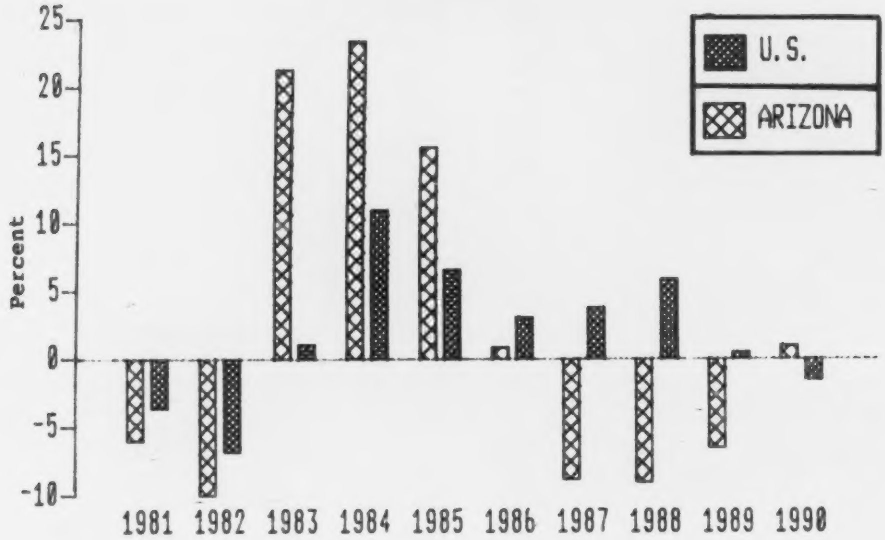
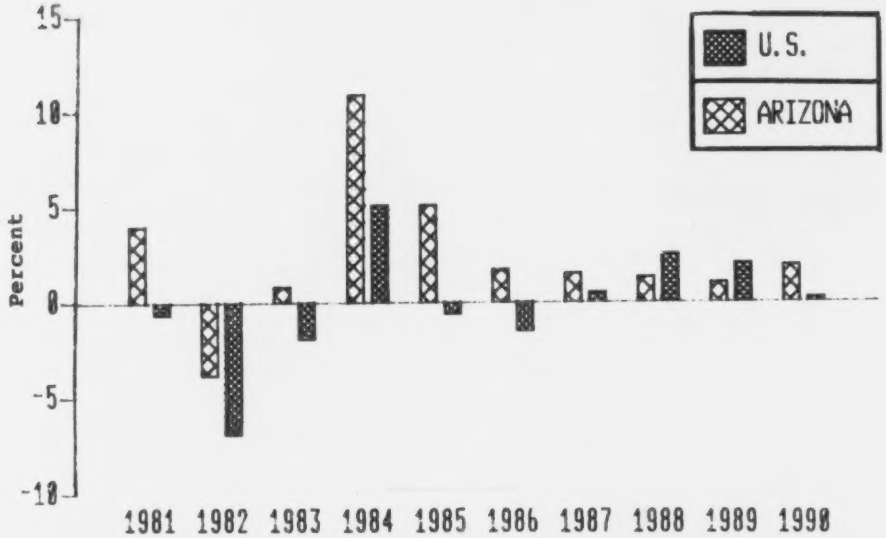


Figure 2

Arizona vs. United States
Manufacturing Employment
Growth Rates (1981-1990)



Sources: Arizona Department of Economic Security, Research Administration, and U.S. Bureau of Labor Statistics, February 1989.

Table 1

WAGE AND SALARY EMPLOYMENT GROWTH
(Annual Averages, In Thousands)

	Arizona			Maricopa County		
	1987	1988	Growth Rate	1987	1988	Growth Rate
Total Wage & Salary Employment	1,385.8	1,410.6	1.8%	913.8	931.3	1.9%
Manufacturing	187.4	189.9	1.3	135.7	138.3	1.9
Mining	11.4	12.0	5.3	0.6	0.7	16.7
Construction	103.2	93.9	-9.0	69.9	64.6	-7.6
TCPU*	71.7	72.7	1.4	49.1	50.3	2.4
Trade	340.3	347.5	2.1	231.5	235.7	1.8
FIRE**	94.5	93.3	-1.3	74.9	74.3	-0.8
Services	345.3	361.2	4.6	232.0	243.9	5.1
Government	232.0	240.3	3.6	120.0	123.6	3.0

	Pima County			Balance of State		
	1987	1988	Growth Rate	1987	1988	Growth Rate
Total Wage & Salary Employment	245.0	247.1	0.9%	227.0	232.2	2.3%
Manufacturing	31.0	30.4	-1.9	20.7	21.2	2.4
Mining	1.6	1.8	12.5	9.2	9.5	3.3
Construction	19.7	17.1	-13.2	13.6	12.2	-10.3
TCPU*	9.2	9.1	-1.1	13.4	13.3	-1.5
Trade	55.6	57.0	2.5	53.2	54.8	3.0
FIRE**	12.8	12.2	-4.7	6.8	6.8	0.0
Services	65.3	67.5	3.4	48.0	49.8	4.0
Government	49.8	51.9	4.2	62.2	64.8	4.2

* TCPU = Transportation, Communications, and Public Utilities

** FIRE = Finance, Insurance, and Real Estate

Note: Totals may not be exact due to rounding.

Source: Arizona Department of Economic Security, Research Administration, February 1989.

jobs, followed by Trade with 7,200 additional workers.

Also on the positive side, TCPU added 1,000 jobs, and employment in Mining expanded by 600. Lower job growth in TCPU was due to slower labor force growth, while improvement in Mining was due to increased efficiency and higher copper prices. These sectors should continue to expand at a fairly healthy rate in 1989 and 1990.

At the substate level, Nonmetropolitan Counties' employment grew 2.3 percent in 1988, followed by Maricopa County at 1.9 percent and Pima County at 0.9 percent. However, because of its size, Maricopa County contributed the largest number of jobs (17,500), followed by Nonmetropolitan Counties (5,200) and Pima County (2,100).

Overall, Arizona's economic activity in 1988 was sluggish. Service-producing sectors drove the economy, while goods-producing sectors -- such as Manufacturing -- performed modestly, and Construction continued in its correction phase, eliminating jobs.

--Jalal Ahmad

Key Variables Play Role in Forecasting Future Growth

Forecasting Arizona's economic future requires analysis of key variables that affect regional, national, and international economies: Gross National Product (GNP), interest rates, inflation, and value of the dollar.

Following is an overview of some key variables expected to influence Arizona's economy in 1989 and 1990.

Despite an increase in interest rates in the second half of 1988, U.S. GNP grew a higher-than-expected 3.8 percent last year, primarily because of continued consumer spending. GNP, however, should slow in the first two quarters of 1989.

The drop in GNP will be due to higher interest rates caused by the Federal Reserve Bank's tightening of the money supply, to slow consumer spending and inflation. Inflation, as measured by the Consumer Price Index (CPI), is expected to increase 5.1 percent in 1989 and 5.5 percent in 1990.

Short-term and long-term interest rates are expected to edge up in 1989, then drop slightly in 1990. Examples: short-term -- three-month Treasury bill is expected to increase to 8.3 percent in 1989, then decline to 7.7 percent in 1990; long-term -- 30-year mortgage rate is forecasted to rise to 10.3 percent in 1989, then slide to 9.8 percent in 1990.

Higher interest rates will negatively affect the demand for interest-sensitive goods and services. For instance, higher interest rates should lower demand for new housing, automobiles and consumer durables.

With higher interest rates, the value of the dollar may not fall or it could even become stronger in the near-term. However, fundamentals of trade theory suggest that in the long-run the dollar should fall until U.S. trade imbalances are significantly reduced. In 1989 the dollar is expected to fall 6 to 9 percent, then drop an additional 5 percent in 1990.

Finally, the price of oil is expected to stay firm or rise slightly in the first two quarters of 1989, then fall in the second half of 1989 and in 1990.

Based on these key variables no national recession is expected in the next two years. These assumptions, however, are modest and call for a slowdown in national economic growth in 1989 and 1990.

It's possible, however, that an unanticipated shock generated from the global market -- skyrocketing oil prices, crash in the U.S. dollar or other unanticipated events -- can easily lead the U.S. economy into slower-than-expected growth or even a recession in late 1989 or in 1990. Since Arizona is tied to the U.S. economy, the state should also slow or recede if a national recession takes place.

--Jalal Ahmad

Annual Forecast

(Continued from page 1)

years. Then economic assumptions and key variables about the expected performance of the national, regional and state economies (See "Key Variables Play Role in Forecasting Growth," above) are factored into the model's 250 equations to derive estimates of employment and unemployment for the current and following years.

Presented in the March issue are AEFM employment and unemployment predictions for 1989 and 1990, and analyses of the state as a whole and three substate regions -- Maricopa and Pima counties, and Nonmetropolitan Counties, also referred to as "Balance of State." Also in this issue is a review of 1988, plus numerous charts and tables, and data comparing the percentage increase in growth in Arizona vs. the United States.

Arizona Forecast: More of the Same in '89, '90

Given an outlook for a weaker national economy in 1989 and 1990, the Arizona Economic Forecasting Model (AEFM) indicates the state's economy will resemble 1988, with enough jobs created to prevent a statewide recession during the next two years. A total of 24,200 jobs, a 1.7 percent rise, are expected to be created in 1989 and 35,800 jobs, a 2.5 percent increase, in 1990.

In the near-term the outlook for Manufacturing remains virtually the same, particularly in light of an expected reduction in defense spending and the likelihood of higher interest rates.

With higher interest rates the dollar probably will become stronger in the world currency market, making U.S. goods more expensive abroad. However, the dollar is expected to fall in the long-term, and both U.S. and Arizona manufacturers are expected to grow at a much healthier rate. Employment in Arizona's Manufacturing sector is expected to grow 1 percent in 1988 and 1.9 percent in 1990.

The environment that surrounds Construction will remain more or less the same, with one additional hurdle. In the coming months short-term, as well as long-term, interest rates are expected to edge upward due to the Federal Reserve Bank's reaction to recent higher inflation.

Higher interest rates do not bode well for Construction, especially its single-family housing sector. Also, recent statistics show vacancy rates in multifamily housing and retail space have not come down to a level where investors are likely to make large new commitments. Due to these factors, employment in Construction is expected to decline 6.5 percent in 1989, followed by a 1 percent gain in 1990.

Along with Construction, the finance and real estate sectors will be affected by higher interest rates in the near-term. Department of Eco-

(Continued on page 7)

Table 2

ARIZONA ECONOMIC FORECASTS
(Annual Averages, in Thousands)

	1988	Growth Rate	1989	Growth Rate	1990	Growth Rate
Labor Force	1,654.0	2.6%	1,703.0	3.0%	1,762.6	3.5%
Unemployed	104.0	3.0	113.8	9.4	113.7	-0.1
Unemployment Rate	6.3%	—	6.7%	—	6.5%	—
Total Employment	1,550.0	2.6	1,589.2	2.5	1,649.0	3.8
Total Wage and Salary Employment	1,410.6	1.8%	1,434.8	1.7%	1,470.6	2.5%
Manufacturing	189.9	1.3	191.8	1.0	195.4	1.9
Mining	12.0	5.3	12.6	5.0	12.9	2.4
Construction	93.9	-9.0	87.8	-6.5	88.7	1.0
TCPU*	72.7	1.4	73.8	1.5	75.1	1.8
Trade	347.5	2.1	355.5	2.3	364.1	2.4
FIRE**	93.3	-1.3	90.5	-3.0	91.8	1.4
Services	361.2	4.6	375.4	3.9	389.0	3.6
Government	240.3	3.6	247.4	3.0	253.6	2.5

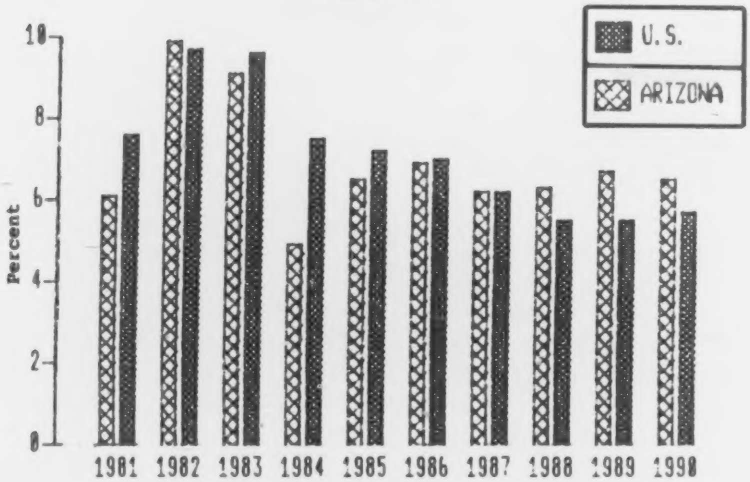
* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

Notes: Totals may not be exact due to rounding.
NA = Data not available at time of printing.

Source: Arizona Department of Economic Security, Research Administration, February 1989.

Figure 3

Arizona vs. United States Civilian Unemployment Rates (1981-1990)



Sources: Arizona Department of Economic Security, Research Administration, and U.S. Bureau of Labor Statistics, February 1989.

nomic Security, Research Administration, expects Finance, Insurance, and Real Estate (FIRE) employment to decline 3 percent in 1989, then rebound with a 1.4 percent gain in 1990.

On the plus side, the service-providing sectors -- Services; Trade; Transportation, Communications, and Public Utilities (TCPU); and Government -- should continue to expand at a fairly healthy rate in 1989 and 1990.

Services alone should create 27,800 jobs in the two-year forecast period. Divisions within Services expected to provide most of the employment gains are: hotels, motels, and lodging places; business services; and personal services.

Trade should also create a large number of jobs (8,000) in 1989, then follow up with 8,600 jobs in 1990. Growth in Trade will primarily come from food stores, followed by department stores, and eating and drinking places.

Also on the positive side, TCPU should add 1,100 jobs in 1989 and 1,300 in 1990. Most of TCPU employment opportunities will be in the transportation sector. Public utilities are expected to experience little change in employment levels because of the slowdown in labor force growth and a tougher regulatory climate in Arizona.

At the substate level, Maricopa County is expected to create 16,100 jobs in 1989 and 23,600 jobs in 1990. Pima County is expected to create 2,900 jobs in 1989, 5,700 in 1990. An additional 5,200 jobs are forecasted for Nonmetropolitan Counties in 1989, 6,500 in 1990. Nonmetropolitan counties that have both tourism and Manufacturing as their economic base should contribute most of the rural-area job growth.

Overall, Arizona's economic activity in 1989 will mirror that of 1988, with greater job growth expected in 1990 and beyond. The unemployment rate, however, will increase slightly to an annual rate of 6.7 percent in 1989, then taper downward to 6.5 percent in 1990.

--Jalal Ahmad

Figure 4

Arizona Wage and Salary Employment
Growth Rates (1981-1990)

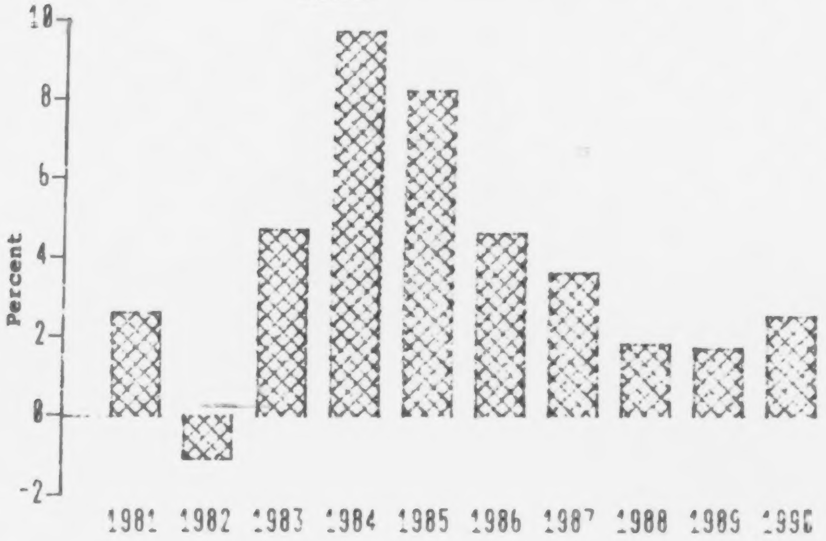
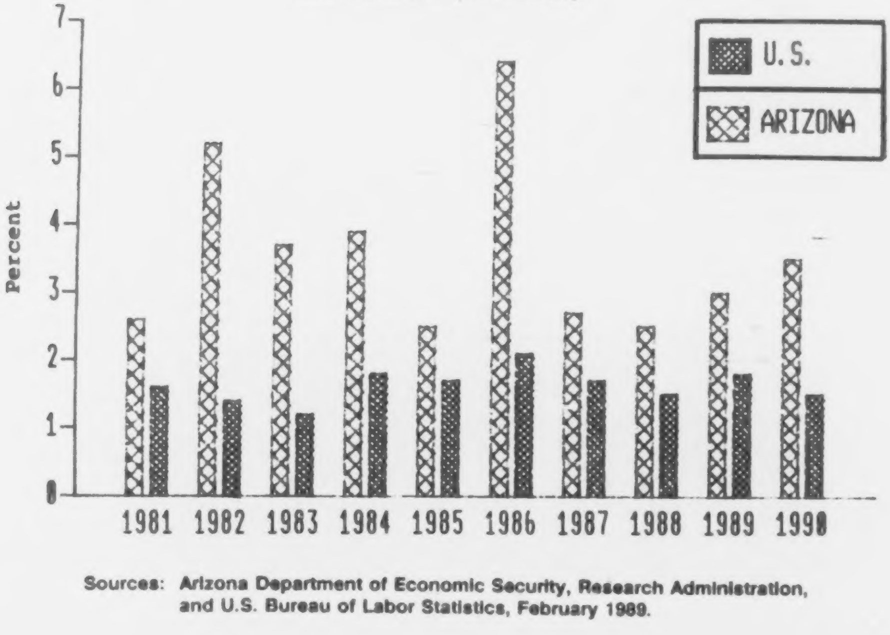


Figure 5

Arizona vs. United States
Civilian Labor Force
Growth Rates (1981-1990)



Sources: Arizona Department of Economic Security, Research Administration, and U.S. Bureau of Labor Statistics, February 1989.

Slow Growth, Not *No* Growth Expected in Maricopa County For Immediate Future

The latter part of 1988 saw a flood of controversy, as political leaders, economic developers, and business writers took exception to bad-mouthing of the Valley economy.

Articles in national and neighboring-state newspapers declaring the Phoenix-area economy went bust brought forth cries for something to be done. The stories chastised developers as modern-day robber barons preying upon unsophisticated local and state governments in their speculative quest to turn cheap agricultural and desert land into Taj Mahal tracts. As a result, the articles said, Phoenix's economy of growth, by growth, and for growth was possessed of a cancer that would soon, if it hadn't already, kill its host.

Did the 1988 Maricopa County economy merit all that melodrama? Only if you believe Phoenix should always be among America's fastest-growing metropolitan areas.

Although area leaders didn't buy the doomsayers' prognosis, they called for more economic development to restore the patient to its former condition as a national champion of growth.

Did the 1988 Maricopa County economy merit all that melodrama? Only if you believe Phoenix should always be among America's fastest-growing metropolitan areas.

The Maricopa County economy did grow, albeit at less than the top national-ranking rates of 1983, 1984, and 1985. Nonfarm wage and salary employment increased 1.9 percent, adding 17,500 jobs.

Services was, as usual, the sector making the greatest contributions to wage and salary employment. Services had two-and-a-half times (5 percent) the overall wage and salary-employment growth rate and accounted for 11,900 new jobs.

Within Services, hotel and other lodging places posted its highest growth rate since 1978, 13.4 percent, adding 2,800 jobs. This solid expansion followed a year of similar growth when 2,400 jobs were added and the hotel industry had a 13 percent growth rate. The last two years have seen the opening of major new resorts in Phoenix, including the lavish Phoenician, and the Esplanade's Ritz Carlton.

While hotels have been growing at near-record rates, business services and health services have been growing at less-than-average rates (2.8 and 5.1 percent) for their industries.

Trade contributed, as well as Services, to job growth in 1988, although at much lower rates. Trade added 4,200 jobs, of which 3,300 were in retail trade. Within retail trade, eating and drinking places grew more slowly than in any year since the 1982 recession.

The remaining growth-contributing industries were Government; Manufacturing; and Transportation, Communications and Public Utilities (TCPU).

Government posted an average year with 3 percent growth (3,600 jobs). Manufacturing had a less-than-aver-

(Continued on page 10)

Table 3

MARICOPA COUNTY ECONOMIC FORECASTS
(Annual Averages, In Thousands)

	1988	Growth Rate	1989	Growth Rate	1990	Growth Rate
Labor Force	1,027.7	NA	1,059.6	3.1%	1,098.8	3.7%
Unemployed	52.5	NA	57.2	9.0	57.1	-0.2
Unemployment Rate	5.1%	—	5.4%	—	5.2%	—
Total Employment	975.1	NA	1,002.4	2.8	1,041.7	3.9
Total Wage and Salary Employment	931.3	1.9%	947.4	1.7%	971.0	2.5%
Manufacturing	138.3	1.9	140.7	1.7	143.4	1.9
Mining	0.7	16.7	0.7	0.0	0.8	14.3
Construction	64.6	-7.6	60.7	-6.0	61.5	1.3
TCPU*	50.3	2.7	51.3	2.0	52.3	2.0
Trade	235.7	1.8	240.8	2.2	246.4	2.3
FIRE**	74.3	-0.8	72.1	-3.0	73.2	1.5
Services	243.9	5.1	254.2	4.2	263.8	3.8
Government	123.6	3.0	126.8	2.6	129.6	2.2

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

Notes: Totals may not be exact due to rounding.
NA = Data not available at time of printing.

Source: Arizona Department of Economic Security, Research Administration, February 1989.

age year, growing 1.9 percent (2,600 jobs). Probably thanks to the dollar's decline, machinery manufacturing had its first gain in four years, picking up 1,500 jobs, a 2.9 percent growth rate.

TCPU grew a respectable 2.4 percent, adding 1,200 jobs, but nothing like its exceptional rate of 11.8 percent (5,200 jobs) in 1987. Several of the major communications companies were adding staff in that year.

Unfortunately, not all of the economic news in 1988 was positive for Maricopa County, as evidenced by the decline of some of the previously stellar-performing industries.

Construction was the chief downside culprit, losing 5,300 jobs. Construction's decline in 1988 was the third year of annual-average decline, although the rate of decline slowed from 1987 (Table 3).

As interest rates climbed, Finance, Insurance, and Real Estate (FIRE) joined Construction on the toboggan run, dropping 600 jobs. Losses were in the real estate and finance divisions of FIRE. Finance lost jobs as the industry adjusted to major growth from deregulation, and as interest rates rose again, reducing demand for mortgage refinancing. Real estate employment declined in response to slower building activity.

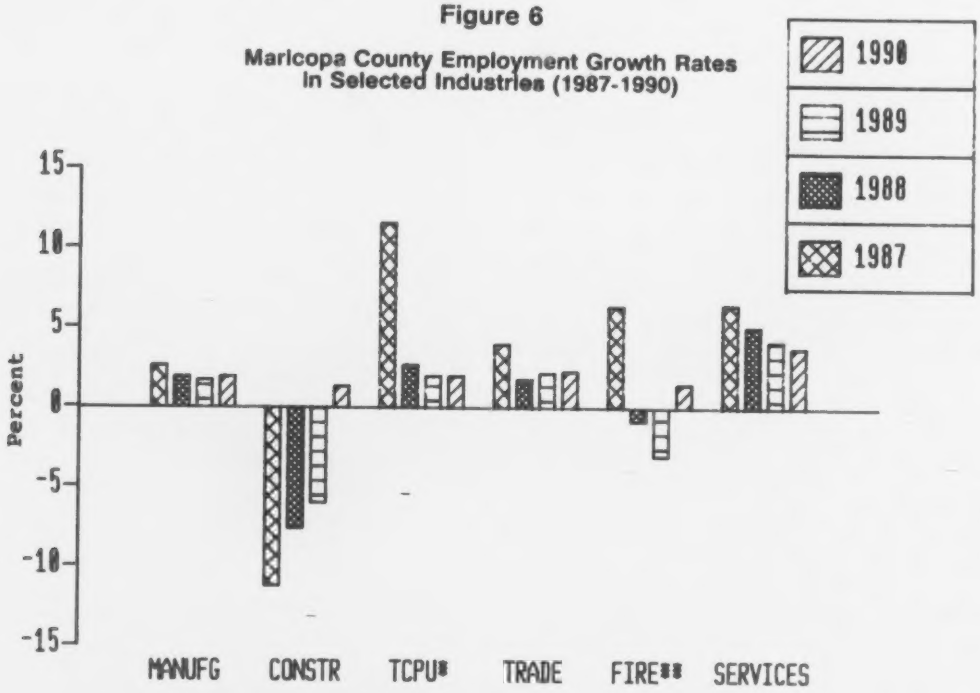
Outlook remains the same

The near-term outlook portends another year like 1988. Given an outlook of moderate, but slowing, national growth due to rising interest rates (from tightening credit policy by the Federal Reserve), Maricopa County's total nonfarm wage and salary employment is expected to grow only 1.7 percent in 1989. A slight improvement is anticipated in

(Continued on page 11)

Figure 6

Maricopa County Employment Growth Rates in Selected Industries (1987-1990)



* Transportation, Communications, and Public Utilities
** Finance, Insurance, and Real Estate

Sources: Arizona Department of Economic Security, Research Administration, and U.S. Bureau of Labor Statistics, February 1989.

1990, with a wage and salary-employment growth rate of 2.5 percent.

The Maricopa County unemployment rate will rise moderately this year. On an annual-average basis, it's expected to reach 5.4 percent in 1989, then drop slightly to 5.2 percent in 1990. Many economists would call this within the range of full employment, although the Phoenix area has experienced rates as low as 3.5 percent as recently as 1984. The 5.4 percent rate represents total unemployed of 57,200.

A milestone is anticipated for Maricopa County total employment in 1989. For the first time it will rise above the million mark, averaging 1,002,400. In 1990 total employment will rise an additional 3.9 percent to 1,041,700.

While the Phoenix-area labor force (the sum of employed and unemployed) climbed to a million souls in 1987, labor force growth slowed in 1988. The labor force is expected to grow at rates of 2.9 and 3.7 percent in 1989 and 1990.

Construction will continue to be the major drag on the Maricopa County economy in 1989. A loss of an additional 3,900 jobs is forecasted for 1989. But before the year is over Construction will have bottomed out, and by 1990 Construction will be on the mend, gaining 800 jobs.

(Recognize this scenario assumes no national recession in the next two years. It also assumes only a moderate money supply crunch by the Federal Reserve in response to ris-

(Continued on page 12)

ing inflation. These events are presently advanced by Wharton Econometric Forecasting Associates as having the greatest probability. With no national recession, area population and business growth will be sufficient to allow adequate absorption of overbuilt multifamily housing and commercial space, which will invite additional construction investment. Availability of both foreign and domestic capital -- looking for a safe haven from perceived riskier investments in stocks and bonds -- will also contribute to rebound in real estate and construction.)

During this year, before construction rebounds, FIRE will lose another 2,100 jobs. By 1990 1,100 of these jobs will be regained. Thereafter, FIRE will grow more in relation to its historic average, at rates closer to the growth rate of the population. By then the finance industry will have sufficient experience with deregulation and multistate banking to better predict its employment needs. There will also be a rebounding demand for real estate sales personnel as new stock is built.

Manufacturing's growth rate will decline to 1.7 percent, but that still means 2,400 factory jobs will be added in 1989. Manufacturing's 1.9 percent growth rate in 1990 will equal 1988's, generating 2,700 new jobs.

Defense spending to hurt Manufacturing

Two high-tech manufacturing components -- aircraft and missiles, and machinery -- will grow even more slowly than Manufacturing as a whole, because defense spending is expected to be flat or decline. The chemicals manufacturing industry has had double-digit rates of growth during the past two years and will have the highest growth rate among Manufacturing's components, 8 percent in 1989. Chemical manufacturers will add 350 jobs in Maricopa County.

As for the strongest sector, Services will grow by the greatest rate and add the most jobs among the major industry groups in 1989. Its rate of growth will be 4.2 percent (10,300 jobs) or two-thirds of all the wage and salary jobs added.

Hotels and other lodging places will still be growing at the greatest rate (9 percent) among the service-industry components, although the industry's growth rate will be down from the 13-plus percent rates of the last two years. Hotel employment growth rates will slow after 1990, but in the next two years more than 3,600 hospitality-industry jobs will be added to the Maricopa County economy.

Health services growth, too, will slow, but will still add 5,000 jobs over the next two years. Business services, which had been growing like gangbusters from 1982 to 1985, has slowed 3 to 4 percent, which will continue into 1989 and beyond.

Trade follows Services in contributions to area jobs. That will continue to be true with Trade adding 5,100 jobs this year and 5,600 in 1990, or just better than 2 percent each year.

Maricopa County's fastest growing Trade component is retail food stores. Food stores have grown in the 6 percent range over the last two years and will still be growing at a 4.6 percent rate in 1989. Research Administration expects food store growth rates to fall to a 3.5 to 4.5 percent growth rate in 1990 and thereafter. (The food store industry has become extremely competitive in the Phoenix area in recent

(Continued on page 22)

The Arizona Labor Force in January

Arizona's unemployment rate held steady at 5.8 percent as the new year began. Although the number of unemployed increased by 8,100 in January, and total employment declined 6,400, Arizona experienced the first December-to-January labor force growth (1,700) in five years.

Remarkably, labor force growth since January 1988 was the best it has been in 10 years. Despite falling from a peak in October, the labor force grew 88,400 from January 1988 to January 1989, a jump of 5.5 percent, the largest growth rate since 1979-1980's 7.8 percent.

While only 13,400 wage and salary jobs were added over the year, total employment ballooned by 76,200. Growth of that magnitude (5 percent) is the best Arizona has experienced since 1983-1984 (9.6 percent).

Total employment, which includes agricultural workers, self-employed, unpaid family workers, and domestic workers, is counted by place of residence. Nonagricultural wage and salary employment does not include these groups and is counted by place of work.

Arizona's wage and salary employment declined as usual between December and January but only by 23,800 (1.7 percent), a less-than-average loss. This year's loss was nothing like the January 1988 slide when nearly 42,000 Arizona workers started the new year by polishing up their resumes.

In fact, this January's over-the-month losses in several major industries are half or less than half those of a year ago. The following industries had substantially smaller January declines than last year: Construction; Transportation, Communications, and Public Utilities (TCPU); Finance, Insurance, and Real Estate (FIRE); Trade; and Services.

Does that imply the worst is behind us when it comes to declines in Arizona employment? The jury is still out.

Construction firms laid off 3,200, continuing the industry's 31-month slide. Since January's Producer Price Index rose a full percentage point, and the Federal Reserve reacted to inflationary fears by selling securities, it's certain that interest rates will rise. That is likely to mean Construction will continue to lose employment in the months ahead.

FIRE continued into its second year of decline, losing 300 jobs. Although its rate of decline is diminishing, FIRE has lost 3,300 jobs since January 1988. Its rate of decline may rise again when the full effects of the current interest rate rise are realized.

Manufacturing lost 1,000 jobs in January. Machinery manufacturing had losses of 400 and manufacturing of nondurable goods lost another 400, principally in chemicals and food. Nevertheless, it was not a bad January for Manufacturing by recent historical standards, declining only two-thirds of the average since 1981-1982. While Manufacturing as a whole has remained relatively flat over the last two years, defense-related business has declined while consumer goods business has increased.

The post-Christmas season layoffs this year were only a fraction of Christmas' past. Trade dropped 6,200, of which 6,100 were in retail trade. Last year 11,800 retail trade workers were laid off after Christmas, and in January 1987, 7800

(Continued on page 18)

Arizona Labor Force and Employment

January 1989 (in thousands)

	Arizona				
				Amount Change	
	Jan.* 1989	Dec. 1988	Jan. 1988	Dec.- Jan.	1988- 1989
TOTAL CIVILIAN LABOR FORCE**	1684.8	1683.1	1596.4	+1.7	+88.4
Total Unemployment	98.1	90.0	85.9	+8.1	+12.2
Rate	5.8	5.3	5.4	----	----
Rate (Sea. Adj.)***	5.8	5.8	5.4	----	----
Total Employment	1586.7	1593.1	1510.5	-6.4	+76.2

The Above Labor Force Statistics Should N

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

TOTAL WAGE AND SALARY	1411.0	1434.8	1397.6	-23.8	+13.4
Manufacturing	188.8	189.8	187.9	-1.0	+0.9
Durable Goods	145.7	146.2	145.6	-0.5	+0.1
Stone, Clay, and Glass	7.5	7.7	7.8	-0.2	-0.3
Primary and Fabricated Metals	15.9	15.8	15.3	+0.1	+0.6
Primary Metals	7.6	7.5	7.3	+0.1	+0.3
Fabricated Metals	8.3	8.3	8.0	+0.0	+0.3
Machinery	65.4	65.8	65.7	-0.4	-0.3
Other Durable Goods	56.9	56.9	56.8	+0.0	+0.1
Aircraft and Missiles	26.1	26.2	26.8	-0.1	-0.7
Lumber and Wood Product (Excluding Furniture)	8.4	8.4	8.0	+0.0	+0.4
All Other Durable Goods	22.4	22.3	22.0	+0.1	+0.4
Nondurable Goods	43.1	43.6	42.3	-0.5	+0.8
Food and Kindred Products	9.2	9.4	9.1	-0.2	+0.1
Apparel	4.5	4.5	4.7	+0.0	-0.2
Printing and Publishing	16.6	16.8	16.4	-0.2	+0.2
All Other Nondurable Goods	12.8	12.9	12.1	-0.1	+0.7
Mining and Quarrying	12.2	12.1	11.6	+0.1	+0.6
Copper Mining	9.0	8.9	8.6	+0.1	+0.4
Other Mining and Quarrying	3.2	3.2	3.0	+0+0	+0.2
Construction	89.4	92.6	92.7	-3.2	-3.3
Trans., Communications, & Public Utilities	72.2	73.1	73.1	-0.9	-0.9
Transportation	36.5	37.2	37.1	-0.7	-0.6
Communications and Public Utilities	35.7	35.9	36.0	-0.2	-0.3
Trade	353.1	359.3	346.6	-6.2	+6.5
Wholesale Trade	68.5	68.6	67.2	-0.1	+1.3
Retail Trade	284.6	290.7	279.4	-6.1	+5.2
General Merchandise and Apparel	44.9	48.5	44.9	-3.6	+0.0
Food Stores	48.2	48.8	46.3	-0.6	+1.9
Automotive and Service Stations	34.4	34.4	32.8	+0.0	+1.6
Eating and Drinking Places	98.1	99.0	96.7	-0.9	+1.4
Other Retail Trade	59.0	60.0	58.7	-1.0	+0.3
Finance, Insurance, and Real Estate	91.2	91.5	94.5	-0.3	-3.3
Services and Miscellaneous	363.2	363.2	357.0	+0.0	+6.2
Hotels and Other Lodging Places	41.3	41.2	40.1	+0.1	+1.2
Business Services	77.1	77.8	76.7	-0.7	+0.4
Health Services	91.7	91.6	89.6	+0.1	+2.1
Other Services	153.1	152.6	150.6	+0.5	+2.5
Government	240.9	253.2	234.2	-12.3	+6.7
Federal	43.6	44.0	43.0	-0.4	+0.6
State and Local	197.3	209.2	191.2	-11.9	+6.1
School	108.6	120.2	107.4	-11.6	+1.2

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

January 1989 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
Jan.* 1989	Dec. 1988	Jan. 1988	Dec.- Jan.	1988- 1989	Jan.* 1989	Dec. 1988	Jan. 1988	Dec.- Jan.	1988- 1989
1042.4	1041.9	993.7	+0.5	+48.7	319.9	319.8	303.9	+0.1	+16.0
50.8	46.8	44.9	+4.0	+5.9	15.7	14.2	13.8	+1.5	+1.9
4.9	4.5	4.5	----	----	4.9	4.4	4.5	----	----
4.8	4.7	4.4	----	----	4.8	4.5	4.4	----	----
991.6	995.1	948.8	-3.5	+42.8	304.2	305.6	290.1	-1.4	+14.1

Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

929.2	943.0	924.8	-13.8	+4.4	248.9	252.9	246.9	-4.0	+2.0
137.8	138.2	136.5	-0.4	+1.3	29.7	30.0	30.9	-0.3	-1.2
107.8	107.9	106.8	-0.1	+1.0	23.9	24.1	25.3	-0.2	-1.4
5.0	5.1	5.2	-0.1	-0.2					
10.5	10.5	10.1	+0.0	+0.4					
52.4	52.5	52.4	-0.1	+0.0					
39.9	39.8	39.1	+0.1	+0.8					
30.0	30.3	29.7	-0.3	+0.3	5.8	5.9	5.6	-0.1	+0.2
5.9	6.0	6.0	-0.1	-0.1					
3.5	3.4	3.4	+0.1	+0.1					
11.7	11.8	11.7	-0.1	+0.0					
8.9	9.1	8.6	-0.2	+0.3					
0.7	0.8	0.7	-0.1	+0.0	2.0	1.9	1.7	+0.1	+0.3
61.6	63.6	63.7	-2.0	-2.1	16.2	16.9	17.5	-0.7	-1.3
50.3	50.9	50.8	-0.6	-0.5	9.0	9.2	9.2	-0.2	-0.2
26.9	27.4	27.0	-0.5	-0.1	4.5	4.7	4.8	-0.2	-0.3
23.4	23.5	23.8	-0.1	-0.4	4.5	4.5	4.4	+0.0	+0.1
239.0	242.7	235.8	-3.7	+3.2	57.7	59.2	57.1	-1.5	+0.6
54.9	54.9	53.5	+0.0	+1.4	6.8	6.9	7.0	-0.1	-0.2
184.1	187.8	182.3	-3.7	+1.8	50.9	52.3	50.1	-1.4	+0.8
28.2	30.3	29.4	-2.1	-1.2	7.8	8.6	7.7	-0.8	+0.1
31.3	31.8	29.7	-0.5	+1.6	8.2	8.3	8.2	-0.1	+0.0
21.8	21.7	20.6	+0.1	+1.2	5.5	5.5	5.4	+0.0	+0.1
63.1	63.7	62.3	-0.6	+0.8	18.2	18.4	18.2	-0.2	+0.0
39.7	40.3	40.3	-0.6	-0.6	11.2	11.5	10.6	-0.3	+0.6
72.6	72.8	75.3	-0.2	-2.7	12.0	12.0	12.3	+0.0	-0.3
244.5	244.9	241.2	-0.4	+3.3	68.7	68.2	67.6	+0.5	+1.1
24.9	24.7	24.5	+0.2	+0.4	6.7	6.7	7.0	+0.0	-0.3
60.2	60.8	60.5	-0.6	-0.3	11.6	11.7	11.4	-0.1	+0.2
59.8	59.7	58.7	+0.1	+1.1	19.7	19.6	19.2	+0.1	+0.5
99.6	99.7	97.5	-0.1	+2.1	30.7	30.2	30.0	+0.5	+0.7
122.7	129.1	120.8	-6.4	+1.9	53.6	55.5	50.6	-1.9	+3.0

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
January 1989

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	15,350	34,550	41,625	12,850	8,375	2,975	5,450
Total Unemployment	2,550	2,725	3,775	1,575	700	250	525
Rate	16.6%	7.9%	9.1%	12.3%	8.4%	8.4%	9.6%
Rate (Seas. Adj.)**	16.4%	7.4%	8.0%	11.6%	8.3%	8.0%	9.1%
Total Employment	12,800	31,825	37,850	11,275	7,675	2,725	4,925

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	14,575	24,650	36,675	10,575	5,225	2,875	3,725
Manufacturing	800	1,200	2,775	1,275	200	75	350
Mining & Quarrying	50	100	150	1,275	0	1,550	125
Construction	525	825	1,400	600	225	200	175
T.C.P.U.	1,975	1,625	2,350	350	150	50	50
Trade	1,450	5,775	8,525	2,100	1,475	225	1,250
F.I.R.E.	300	700	775	275	100	25	100
Services & Misc.	4,225	4,775	9,650	2,100	900	150	900
Government	5,250	9,650	11,050	2,600	2,175	600	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	32,725	26,875	39,275	10,425	37,325	54,575
Total Unemployment	2,175	3,575	3,250	1,050	2,600	6,825
Rate	6.6%	13.3%	8.3%	10.1%	7.0%	12.5%
Rate (Seas. Adj.)**	6.3%	12.5%	8.3%	11.9%	6.3%	17.3%
Total Employment	30,550	23,300	36,025	9,375	34,725	47,750

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	22,475	19,550	30,575	9,725	24,700	27,550
Manufacturing	2,925	1,875	4,150	1,375	2,175	2,125
Mining & Quarrying	200	1,150	3,700	0	1,125	50
Construction	1,750	775	1,575	325	1,875	1,350
T.C.P.U.	1,175	1,875	950	525	925	1,000
Trade	6,725	3,750	5,450	3,975	6,800	8,850
F.I.R.E.	975	375	775	275	975	1,025
Services & Misc.	5,075	4,575	4,275	1,575	5,575	6,150
Government	3,650	5,175	9,700	1,675	5,250	7,000

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities

F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Jan.* 1989	Dec. 1988	Jan. 1988	Jan.* 1989	Dec. 1988	Jan. 1988	Jan.* 1989	Dec. 1988	Jan. 1988
Manufacturing	404.15	413.66	396.82	40.7	41.7	40.7	9.93	9.92	9.75
Aircraft & Missiles	592.30	INA	INA	44.4	INA	INA	13.34	INA	INA
Food & Kindred Prod.	347.58	326.58	373.60	40.7	39.3	40.0	8.54	8.31	9.34
Primary Metals	505.72	503.87	438.22	40.2	39.8	37.2	12.58	12.66	11.78
Machinery	397.19	411.26	388.65	39.6	40.8	40.4	10.03	10.08	9.62
Copper Mining	543.54	525.10	511.29	42.9	40.8	41.3	12.67	12.87	12.38
Construction	418.40	420.64	426.16	35.7	36.2	36.3	11.72	11.62	11.74
Utilities	692.30	640.48	599.59	43.9	42.5	41.9	15.77	15.07	14.31
Retail Trade**	241.15	242.22	241.16	32.5	33.0	31.9	7.42	7.34	7.56
Wholesale Trade	374.01	369.72	389.61	39.0	39.0	39.0	9.59	9.48	9.99

Estimated Hours and Earnings of Production Workers in Selected Industries Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Jan.* 1989	Dec. 1988	Jan. 1988	Jan.* 1989	Dec. 1988	Jan. 1988	Jan.* 1989	Dec. 1988	Jan. 1988
Manufacturing	429.93	439.95	434.06	41.3	42.1	41.3	10.41	10.45	10.51
Construction	433.31	439.56	440.32	36.2	37.0	36.3	11.97	11.88	12.13
Retail Trade**	268.20	267.81	264.54	33.4	33.9	32.7	8.03	7.90	8.09
Wholesale Trade	393.39	391.44	406.21	39.3	39.7	39.4	10.01	9.86	10.31

Estimated Hours and Earnings of Production Workers in Selected Industries Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Jan.* 1989	Dec. 1988	Jan. 1988	Jan.* 1989	Dec. 1988	Jan. 1988	Jan.* 1989	Dec. 1988	Jan. 1988
Manufacturing	377.28	386.16	374.53	39.3	40.1	39.3	9.60	9.63	9.53
Copper Mining	615.55	578.34	539.75	44.8	42.0	42.5	13.74	13.77	12.70
Construction	386.71	388.07	380.06	36.9	37.1	36.3	10.48	10.46	10.47
Utilities	595.85	584.22	585.50	40.7	41.2	42.8	14.64	14.18	13.68

* Preliminary
** Excludes eating and drinking places.

NOTE: These estimates are based on a sample of full-time and part-time production and related employees whose payroll and hours are reported for the pay period that includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
January 1989

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,664,023	1,567,496	96,527	5.8%
Apache	15,144	12,638	2,506	16.5
Cochise	34,112	31,436	2,676	7.8
Coconino	41,102	37,390	3,712	9.0
Gila	12,694	11,148	1,546	12.2
Graham	8,293	7,593	700	8.4
Greenlee	2,943	2,703	240	8.2
La Paz	5,366	4,854	512	9.5
Maricopa	1,029,647	979,644	50,003	4.9
Mohave	32,334	30,181	2,153	6.7
Navajo	26,526	23,018	3,508	13.2
Pima	316,042	300,558	15,484	4.9
Pinal	38,770	35,578	3,192	8.2
Santa Cruz	10,283	9,260	1,023	9.9
Yavapai	36,876	34,318	2,558	6.9
Yuma	53,890	47,177	6,713	12.5

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in January

(Continued from page 13)

were let go. But then Arizona retail firms only increased staff 14,100 from September to December in 1988 compared to 20,000 in 1987 and 17,800 in 1986. Fewer employees were brought on for Christmas, so fewer were let go after the holiday season.

TCPU was the remaining industry that took a substantial post-Christmas decline but only half that of a year ago. It lost 700 jobs in January. Besides fluctuating because of Christmas seasonal changes, TCPU also fluctuates with the tourist season.

Other tourism-related industries -- restaurants and bars (retail trade), hotels, and amusements (Services) -- posted mixed trends in January. Restaurants and bars declined 900, hotels had no change, and amusements added 100. February and March statistics should be better indicators of the condition of this year's tourism season.

Government had normal seasonal declines, dropping 12,300 in January. Most of these losses were from school recesses, including reductions in work-study student employment.

--Ron Simon

Pima County Takes Knocks, But Worst Appears Over

Tucson-area economic developers suffered a soul-searching year during 1988 as several major manufacturers announced plans to leave Pima County.

Looming largest among these was Big Blue, for International Business Machines was Tucson's pride. IBM announced in 1988 it was discontinuing its manufacturing operation in Tucson, reducing its 5,000-employee workforce in half by the end of 1989. In other major developments, Gates Learjet completed its withdrawal to Wichita, Kan., closing a chapter on Pima County growth, while Hughes Aircraft Co. laid off about 1,000 workers due to a reduction in military contracts.

Possibly related to the Hughes' cutbacks, the U.S. Defense Department announced plans to close or pare selected military bases around the country. Davis-Monthon Air Force Base is targeted to lose nearly 500 military personnel which, although it doesn't directly affect Pima County's labor force totals, does have a major ripple effect on the area's economy.

After a year like that, how could things get worse? Tucson leaders will be happy to learn they probably won't.

Despite these horrendous announcements, Pima County nonfarm wage and salary employment grew in 1988, albeit at 0.9 percent, its slowest rate since the 1982 recession. Pima County also had the dubious distinction of growing at half the rate of Arizona's two other major divisions, Maricopa County and Nonmetropolitan Counties. Pima County's growth rate translates to a net of 2,100 new jobs.

Most new jobs created in 1988 were in Services (2,200) and Government *(2,100), although the retail trade* division of Trade made a significant contribution (1,800).

Government's rate of growth exceeded all other major industry groups, coming in at 4.2 percent. It was the fastest Government growth rate in 14 years (4.9 percent in 1975). Services' rate, on the other hand, was the lowest it has been since the 1982 recession (3.4 percent in 1988, 4.8 percent in 1982).

By 1990 all industries of the Tucson-area labor market will be growing again, although it will be slow growth.

While resort development in Tucson was appealing for most of this decade, high vacancy rates dampened enthusiasm for continuing new investments. Within Services, hotel employment had its slowest growth rate (1.5 percent) in 10 years. Last year's slowdown followed three years of double-digit growth in which 800 hospitality jobs were added each year. Meanwhile, business services (4.5 percent) and health services (3.7 percent) grew at half the average annual rates since 1982.

Trade's growth rate in 1988 was lower than it has been in five years, tripping along at 2.5 percent, just above the average for all industries. Wholesale trade lost employment for the second straight year, nearly returning to its 1984 level. Retail trade made up for some of that job loss, growing at a healthy, but not spectacular, 3.7 percent rate.

Mining employment grew for the first time in seven years on an annual-av-

(Continued on page 20)

Table 4

PIMA COUNTY ECONOMIC FORECASTS
(Annual Averages, In Thousands)

	1988	Growth Rate	1989	Growth Rate	1990	Growth Rate
Labor Force	311.9	NA	319.6	2.5%	330.2	3.3%
Unemployed	16.0	NA	18.2	13.8	17.9	-1.6
Unemployment Rate	5.1%	—	5.7%	—	5.4%	—
Total Employment	295.9	NA	301.4	1.9	312.3	3.6
Total Wage and Salary Employment	247.1	0.9%	250.0	1.2%	255.7	2.3%
Manufacturing	30.4	-1.9	29.6	-2.6	30.1	1.7
Mining	1.8	12.5	2.0	2.0	2.1	2.1
Construction	17.1	-13.2	15.6	-8.8	15.8	1.3
TCPU*	9.1	-1.1	9.2	1.1	9.4	2.2
Trade	57.0	2.5	58.6	2.8	60.1	2.6
FIRE**	12.2	-4.7	11.8	-3.3	11.9	0.9
Services	67.5	3.4	69.5	3.0	71.7	3.2
Government	51.9	4.2	53.6	3.3	54.7	2.1

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

Notes: Totals may not be exact due to rounding.
NA = Data not available at time of printing.

Source: Arizona Department of Economic Security, Research Administration, February 1989.

erage basis. Only 200 jobs were added over the year, reversing a trend that has seen 6,000 jobs lost since 1981. Improved industry technology and rising world copper prices have made the turnabout possible.

Industries losing jobs in 1988 were: Construction; Finance, Insurance and Real Estate (FIRE); Manufacturing; and Transportation, Communications, and Public Utilities (TCPU). Combined, they lost 3,900 jobs.

Construction employment, which peaked in 1986 at a level of 21,400 jobs, declined to 17,400 last year, a 21 percent loss. As in the Phoenix area, overbuilding brought on the decline.

While Construction is in its second year of decline, FIRE posted its first annual-average loss since 1976, dropping 600 jobs. Manufacturing has dropped 600 jobs each of the past two years. TCPU, which declined by only 100 jobs, has held a relatively stable growth level since 1982.

Growth to remain sluggish in '89

The Tucson-area labor market will employ a quarter million wage and salary employees in 1989. Growth, however, will continue at a sluggish 1.2 percent rate. By 1990 growth will accelerate to 2.3 percent, adding a net 5,700 new jobs.

Services, Government and Trade will add the most new jobs in Pima County (5,300 combined), as they have in the last two years.

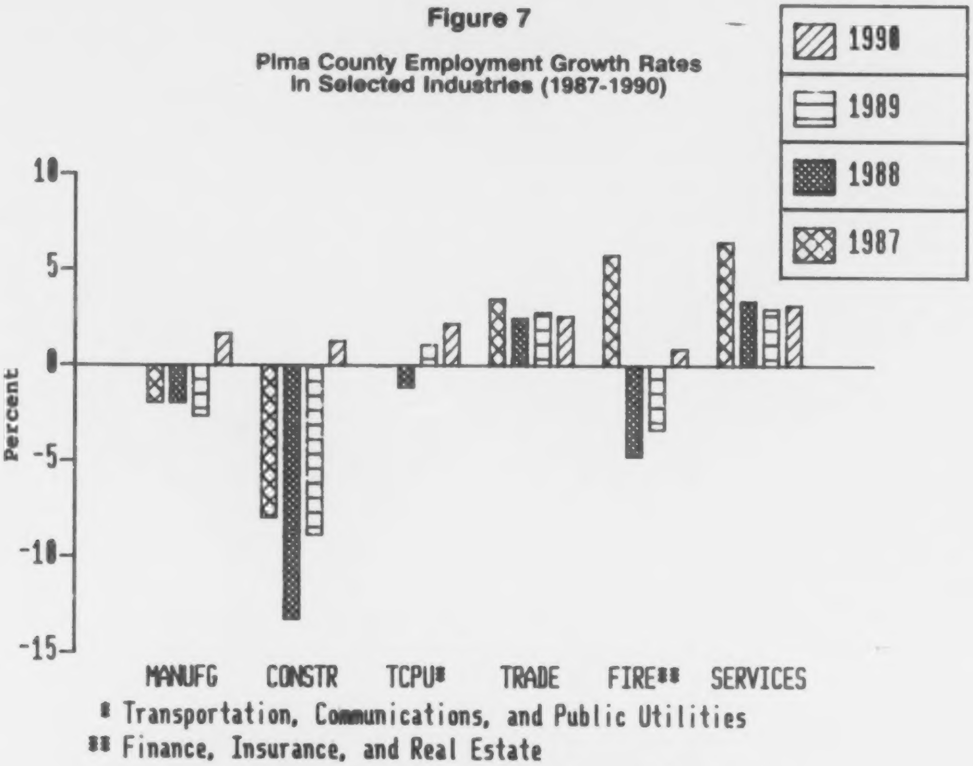
Government will still grow in 1989 at the greatest rate (3.3 percent) of all industries, bu Services will add the most jobs (2,000). In 1990 Services will grow at the greatest rate (3.2 percent) and add the most new jobs (2,200). Trade will add about 1,500 workers each year.

Services' major components will all

(Continued on page 21)

Figure 7

Pima County Employment Growth Rates in Selected Industries (1987-1990)



Sources: Arizona Department of Economic Security, Research Administration, and U.S. Bureau of Labor Statistics, February 1989.

grow slowly in the next two years. The heyday of hotel growth appears to be over. Even after the near dormant year of 1988, hotels will not have substantially accelerated growth, increasing 2.6 percent in 1989 and 2.3 percent in 1990.

Business services will not do much better, posting growth rates of 2.6 percent in each of the next two years. Health services' rates will at least climb above the 3-percent level with rates of 3.7 and 3.1 in 1989 and 1990.

Trade will mimic Services, growing at rates of 2.8 and 2.6 percent the next two years. Wholesale trade will suffer its third straight year of decline, losing 125 jobs in 1989. By 1990, however, wholesale trade will begin to grow again, albeit at less than a 1-percent rate. Retail trade growth, meanwhile, will slow to 3.4 percent in 1989 and 2.8 percent in 1990. Among retail trade's components, food stores will enjoy the greatest rates of growth (4.5 to 5.0 percent).

Now that Mining has turned, it will continue to grow over the next two years. Research Administration expects an additional 300 jobs during that time as long as world copper prices remain high. Despite relatively high world copper prices, however, there will be no return to anything resembling peak Mining employment levels of almost a decade ago.

Construction leads downside industries

The downside industries will continue to be Construction, FIRE, and Manufacturing. Combined they will lose 2,700 jobs in 1989. Construction will account for more than half of those losses. Manufacturing will realize the already announced losses in nonelectrical machinery and air

(Continued on page 22)

craft and missiles, as well as some losses in aggregates because of the down Construction industry.

The good news in all of this is that 1989 will be the bottom of the decline. By 1990 all industries of the Tucson-area labor market will be growing again, although it will be slow growth. This outlook could, of course, be postponed if the Federal Reserve overreacts to rising inflation and causes interest rates to go through the roof.

Tucson economic developers may be asking the same question as their counterparts in Phoenix. "Where did we go wrong?" In Research Administration's view, no one among the economic-development community necessarily did anything wrong.

The downturn in Construction is not a structural change. Rather, Pima County has suffered a cyclical downturn that will reverse itself when interest rates improve and population growth accelerates. Research Administration believes that is also true for Manufacturing. Indeed, some announcements of Tucson relocations by small- to medium-sized manufacturers have already been made.

--Ron Simon

Slow Growth Forecasted in Maricopa County

(Continued from page 12)

years. Several regional chains from other states have entered the Phoenix market and are challenging local stores for area business.)

Three components of retail trade that serve both local residents and tourists are expected to have low growth rates in 1989 -- department stores, automotive stores, and eating and drinking places. All three will experience modest improvement in 1990.

Transportation, Communications, and Public Utilities (TCPU) and Government will grow at rates of about 2 to 2.5 percent during 1989 and 1990. Government budgets will be squeezed from the lack of growth of other industries, and from slowed population growth. State and local governments are searching for potential revenue enhancements in order to meet the expectations of those already here and build the infrastructure for future growth.

Slower growth expected

Growth continues in Maricopa County at rates substantially reduced from 1983, 1984, and 1985; rates many would say are more sustainable. The Phoenix area will not be a national champion in employment growth during the next two years, but it will be highly rated in another category.

The U.S. Census Bureau projects Arizona to be the fastest growing state during the 1990s. Few analysts in the state disagree with that outlook. Since population growth cannot be sustained without job growth, higher rates of job growth are certain to return. The long-term outlook for the Phoenix area remains positive.

--Ron Simon

Job-Growth Rate to Remain Higher in Nonmetropolitan Counties

For the third year in a row Arizona's rural counties recorded stronger job growth than the state's two metropolitan counties (Maricopa and Pima).

Revised statistics reveal that Nonmetropolitan Counties' wage and salary employment grew 2.3 percent last year compared to 1.9 percent in Maricopa County and 0.9 percent in Pima County.

Rural counties, however, slowed in job creation last year as the result of job losses in two sectors -- Construction; and Transportation, Communications, and Public Utilities (TCPU) -- plus no net addition to employment in Finance, Insurance, and Real Estate (FIRE).

Higher job growth in Nonmetropolitan Counties is forecasted for the next two years. Jobs are expected to increase 2.2 percent in rural counties in 1989 -- compared to growth of 1.7 percent in Maricopa County and 1.2 percent in Pima County -- then increase slightly to 2.7 percent in 1990.

The Nonmetropolitan Counties' unemployment rate edged up in 1988 to 11.3 percent (from 10.9 percent) due to negative or no job growth in Construction, TCPU, and FIRE.

With little improvement expected in these sectors in urban areas of the state, many rural county workers will remain in their immediate areas, creating further pressure on their counties' unemployment rates. Research Administration expects the rural counties' unemployment rate to climb to 11.9 percent in 1989, then dip slightly to 11.6 percent in 1990.

(Continued on page 24)

Table 5

NONMETROPOLITAN COUNTIES ECONOMIC FORECASTS
(Annual Averages, in Thousands)

	1988	Growth Rate	1989	Growth Rate	1990	Growth Rate
Labor Force	314.4	NA	323.8	3.0%	333.6	3.0%
Unemployed	35.5	NA	38.4	8.2	38.7	0.8
Unemployment Rate	11.3%	—	11.9%	—	11.6%	—
Total Employment	279.0	NA	285.4	2.3	295.0	3.4
Total Wage and Salary Employment	232.2	2.3%	237.4	2.2%	243.9	2.7%
Manufacturing	21.2	2.4	21.5	1.4	21.9	1.9
Mining	9.5	3.3	9.9	4.2	10.0	1.0
Construction	12.2	-10.3	11.5	-5.7	11.4	-0.9
TCPU*	13.3	-1.5	13.3	0.0	13.4	0.8
Trade	54.8	3.0	56.1	2.4	57.6	2.7
FIRE**	6.8	0.0	6.8	-2.9	6.7	1.5
Services	49.8	4.0	51.7	3.8	53.5	3.5
Government	64.8	4.2	67.0	3.4	69.3	3.4

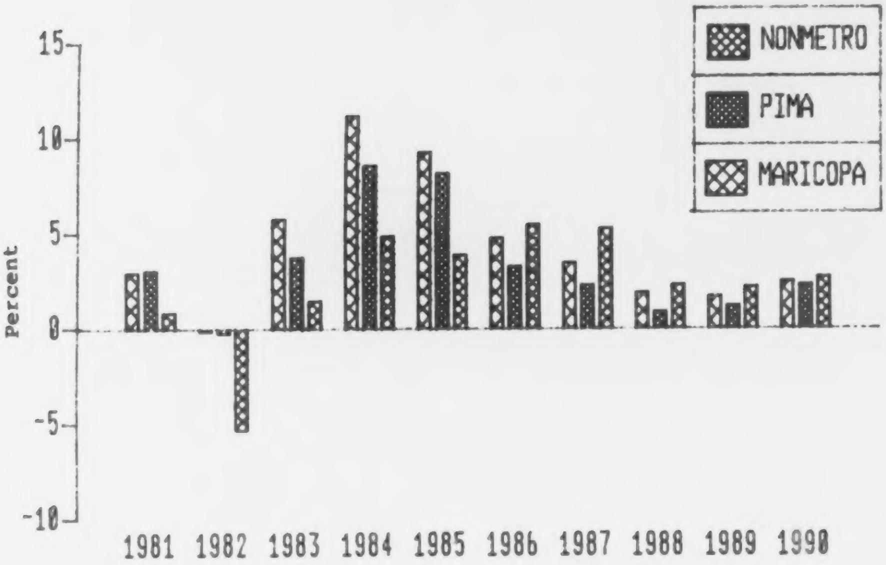
* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

Notes: Totals may not be exact due to rounding.
NA = Data not available at time of printing.

Source: Arizona Department of Economic Security, Research Administration, February 1989.

Figure 8

Wage and Salary Employment Growth Rates by Area (1981-1990)



Sources: Arizona DES, Research Administration, and U.S. Bureau of Labor Statistics, February 1989.

Manufacturing rebounded with a net addition of 500 jobs in 1988, after a decline of 100 jobs in 1987. Durable sectors contributed most of the employment gain (400), primarily from nonelectrical machinery and primary metals industries. Nondurable sectors improved in 1988 with stronger job growth from printing and publishing, and food processing companies. The apparel industry continued to struggle, losing 200 jobs in 1988.

The outlook is weaker for Manufacturing the next two years, with projected job growth of 1.4 percent in 1989 and 1.9 percent in 1990. Industries showing the strongest growth should be printing and publishing, and primary metals.

Mining, for the second straight year, reversed the trend of declining job growth that began in 1982, adding a net of 300 jobs. Gains in Mining were triggered by favorable conditions -- steady prices of copper of more than $1 per pound, short-term demand exceeding supply, and more advanced technology to efficiently extract and process ore. Job growth in Mining is expected to continue with 400 new jobs (4.2 percent) in 1989 and 100 new jobs (1 percent) in 1990.

Rural-area employment in Construction followed the downtrend of urban areas that started in 1987. This sector lost 1,400 jobs (a 10.3 percent drop) in 1988, Construction's first decline in the rural counties since 1982. Job losses occurred in all areas of heavy construction and special trades, but general contracting did manage a gain.

With a forecast of higher interest rates and the completion of several large projects, all sectors of Con-

(Continued on page 25)

struction are expected to decline during the next two years. Employment levels are projected to drop 5.7 percent in 1989 and 0.9 percent in 1990.

Rural-area Trade and Services sectors added 3,400 new jobs (3.4 percent) in 1988, primarily due to gains in tourist-related industries. Yavapai, Coconino and Mohave counties were most responsible for job growth.

A decline in tourism due to a slowdown in the national and Arizona economies will lead to moderate growth in Trade and Services the next two years. Employment levels in Trade should increase 2.4 percent in 1989 and 2.7 percent in 1990. Services is expected to grow 3.8 percent in 1989 and 3.5 percent in 1990.

TCPU recorded a 1.5 percent decrease in employment levels last year due to a drop in transportation industries and only slight gains in the public utilities sector.

Southern rural counties, which rely heavily on trade with Mexico, were responsible for the TCPU loss. One of the causes: the dollar's higher value in relation to the Mexican peso generated less trade and consequently fewer employment opportunities for the trucking industry on the Arizona side of the border. TCPU employment levels are expected to remain the same in 1989, followed by an increase of 0.8 percent in 1990.

Finance industries caused a 1.5 percent decline in FIRE employment in 1988, the sector's first drop since 1975. With an outlook for higher interest rates, FIRE employment is projected to decline 2.9 percent in 1989, then rebound with a 1.5 percent gain in 1990.

Government, which added 2,600 jobs (4.2 percent) in the rural counties in 1988, will continue to grow but at a slower rate of 3.4 percent in the next two years. Slower growth will be due to budget constraints at both the state and federal levels.

The overall economic outlook for Nonmetropolitan Counties the next two years is positive, with nearly 11,700 jobs expected to be created. But counties with diversified economies -- emphasizing manufacturing and tourism instead of agriculture -- will contribute to most of the rural-area growth.

--Jalal Ahmad

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported from these sources.

MANUFACTURING - **Mold Masters Inc.** of Covina, Calif., is relocating its manufacturing operation from Renton, Wash., to the Estrella Distribution Center in Goodyear. The move of the plastics manufacturer to a building formerly owned by the Quaker Maid Co. (near the intersection of Arizona 85 and Cotton Lane) is expected to generate 100 production jobs immediately and up to 500 positions within two years.

Citing a decline in defense contracts, **Hughes Aircraft Co.** laid off

(Continued on page 26)

80 to 90 production-line employees in February at its Missile Systems Group plant in Tucson. Hughes has reduced its work force by about 2,500 in the past three years.

Talley Industries Inc. has sold its air-bag manufacturing plant in Mesa to TRW Inc. TRW is not expected to make any changes in the number of employees (200) at the 100,000-square-foot facility

CONSTRUCTION - A Japanese company is joining forces with a U.S. developer to build a "superblock" project in downtown Mesa. **Mitsui Kensetsu** will have a 32-percent interest in a seven-story office tower and 50 percent share in the remainder of the project, which will include movie theaters, retail shops, fountain and parking garage.

Continental Homes led Valley builders in new home sales in 1988 with 1,209, up 77 from the previous year. Overall, however, new home sales in the Phoenix metropolitan area dropped 23 percent from 1987. Rounding out a list of the top new home builders in the Valley are: UDC Homes, General Homes, Del E. Webb Development, Knoell Homes, U.S. Homes, Pulte Homes, Estes Homes, Richmond American Homes, and Cardon Homes. Cardon, however, recently went out of business due to slumping sales in the Valley and Denver.

TRADE - Construction is set to begin this month on the **Bell Canyon Pavilions** Shopping Center at Bell Road and the Black Canyon Freeway in Phoenix. Anchoring the 366,000-square-foot retail center will be an Albertson's food store, first in the Valley for the 490-store chain. Kobel Development Co. is heading the project.

A wide variety of discount stores will be making their first appearance in the Valley during 1989. **BizMart Office Products Supercenters** of Arlington, Texas, will open four stores this year. Each store, which has about 25,000 square feet of space, will employ about 40 people. Two of the locations have been determined; one at Interstate 17 and Dunlap Avenue, and the other at Broadway and Rural roads. ... **Office Club** of Concord, Calif., a similar operation to BizMart, will open its first store in the Phoenix area in April and two more by the end of 1989. Each store has about 20,000 square feet and employs 35 workers. ... Two to three **Circuit City Superstores** are expected to open before the Christmas season at sites to be determined. Richmond, Va.-based Circuit City, a chain of 122 electronics and appliance stores in 13 states, typically employs about 60 people per location. ... Off-price clothing and household goods will be offered through several **T.J. Maxx** department stores if plans can be worked out. The Framingham, Mass., chain sells goods from 20 to 60 percent below list price.

MINING - The opening of a new copper mine about 15 miles northeast of Safford will generate 250 jobs during a construction phase and 100 full-time positions by mid-1990 when production is expected to begin. **AZCO Mining** plans to invest $40 million to develop the open-pit mine and electrowinning plant that is expected to yield about 200 million tons of copper oxide a year.

Expansion of Asarco Inc.'s **Mission Mine complex** 20 miles south of Green Valley is expected to bring 200 additional jobs during the next three years. The $260 million project will modernize Asarco's operations in Arizona and El Paso, Texas, and increase copper production by 40 percent, the company said.

FINANCE, INSURANCE and REAL ESTATE - Three Valley savings and loans were

(Continued on page 27)

taken over by federal regulators in February due to insolvency problems. **Southwest Savings, Security Savings** and **Universal Savings** were among 25 U.S. thrifts put into federal conservatorship as part of a plan instituted by President Bush. The savings and loans, which have not announced any layoffs, are continuing business as usual.

Chase Bank of Arizona will lay off 35 employees by the end of March due to poor economic conditions in the state, bank officials said. The release of branch managers, administrative staff and others will leave Chase, a subsidiary of Chase Manhattan Corp. of New York., with about 500 employees in Arizona. Chase Bank of Arizona lost $41 million in 1988, partly due to its writing-down of real estate assets.

TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES - Tucson could become one of the largest private aviation training and service centers if an Irving, Texas, company and Tucson officials can reach an agreement. As of the first week of March, **Imagineering IEC** and the city of Tucson were close to making a deal that would allow Imagineering to establish a training facility at the vacated Learjet Corp. manufacturing plant at Tucson International Airport. It is estimated that the company would hire several hundred workers initially and into the "thousands" down the line. Any agreement would not likely affect an effort to lure Italian plane manufacturer **Piaggio Aviation Inc.**, which would also need part of the former Learjet plant to manufacture its Avanti P-180 turboprop aircraft. (See "New Developments," *Labor Market Information Newsletter*, February 1989.)

SERVICES AND MISCELLANEOUS - The Valley tourism industry recently received a double-dose of good news. First, convention bookings doubled in the second half of 1988, compared to the same period the previous year. The increase is due primarily to an effort to attract specific groups that would use the Phoenix Civic Plaza. Second, it's estimated hotel occupancy rates will rise to 59 percent in 1989, 2 percent higher than in 1988. The increase marks the first time in five years the occupancy rate has risen. Statewide, 61 percent of hotel rooms are expected to be filled.

LAW -- It's now illegal for most employers involved in interstate commerce to use **polygraph exams** for pre-employment screening and in random instances on workers already on the payroll. The restrictions are due to a new federal law that went into effect in January. Major exceptions include federal, state and local governments; businesses that work with the Defense Department; companies involved with controlled substances; and firms in the security field.

The **Western Region of the Immigration and Naturalization Service** has issued more than $1 million in fines against 338 employers in California, Nevada, Arizona, Hawaii, and Guam since legislation on immigration reform took effect in June 1988. It's estimated 90 percent of employers in the region are complying with the new law.

VOCATIONAL EDUCATION -- The state Department of Education has awarded funds to **Queen Creek Unified School District** to establish a high-technology laboratory. Lab 2000 is designed to expose students (grades 7-12) to four business sectors where technology is utilized -- construction, transportation, manufacturing and communications. Anyone interested is also eligible to visit the lab. Additional information is available by contacting Roger Smith, 987-3078.

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ARIZONA LABOR MARKET INFORMATION
NEWSLETTER

Vol. XIII No.4
April 1989

Unemployment Rate

Seasonally Adjusted
February*

ARIZONA	-	5.9%
Maricopa Co.	-	4.8%
Pima Co.	-	5.0%
U.S.	-	5.1%

Consumer Price Index

U.S. - January 1989
Base = 1982-84

Wage Earner/Clerical Worker	-	120.2
% Chg. Year Ago.		4.8
All Urban	-	121.6
% Chg. Year Ago		4.8

Phoenix - 4th Qtr 1988
Base - 1982-84

All Urban	-	122.5
% Chg. Year Ago		5.1

Tucson - 4th Qtr 1988
Base = 1982-84

All Urban	-	124.3
% Chg. Year Ago		3.2

* Preliminary

HAPPY BIRTHDAY
5th
RESEARCH ADMINISTRATION

Data-Gathering Unit Grows Up Fast, P. 2

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Research Administration Created to Improve Collection, Analysis of Labor Market Data

First in a series

In an effort to give readers a better understanding of the functions of DES, Research Administration, beginning this month and continuing for several issues, the Arizona LMI Newsletter will take an in-depth look at the data-gathering and analyis center which measures the state's economic pulse. Articles will focus on the four program areas that make up Research Administration and the functions they provide to the public and private sectors, plus look at what the future holds for this five-year-old unit. Starting off the series is a brief history of Research Administration and an overview of its components.

DES, Research Administration (RA), is celebrating a birthday of sorts. Five years ago this month DES created RA (within the Division of Employment and Rehabilitation Services (DERS)) with a goal of improved coordination in the collection and dissemination of Arizona labor market information.

Primarily the brainchild of RA's current and only administrator, Dan Anderson, RA brings together federally-legislated programs and other functions that prior to April 1984 operated as separate entities, in and outside DERS.

For example, most of the programs that make up two of RA's current units -- Economic Analysis and Data Systems -- were previously spread out among two DERS' sections, Employment and Training Administration (ETA), and Unemployment Insurance Administration (UIA). On the other hand, the Population Statistics unit, which joined RA in 1987, was under the Division of Planning and Policy Development, which is no longer in existence.

Some of the initial reasons for establishing an umbrella organization for labor market information were:

--reduced fragmentation in the collection, analysis and dissemination of economic information.

--a one-stop shopping center of data for the public, and private and government organizations.

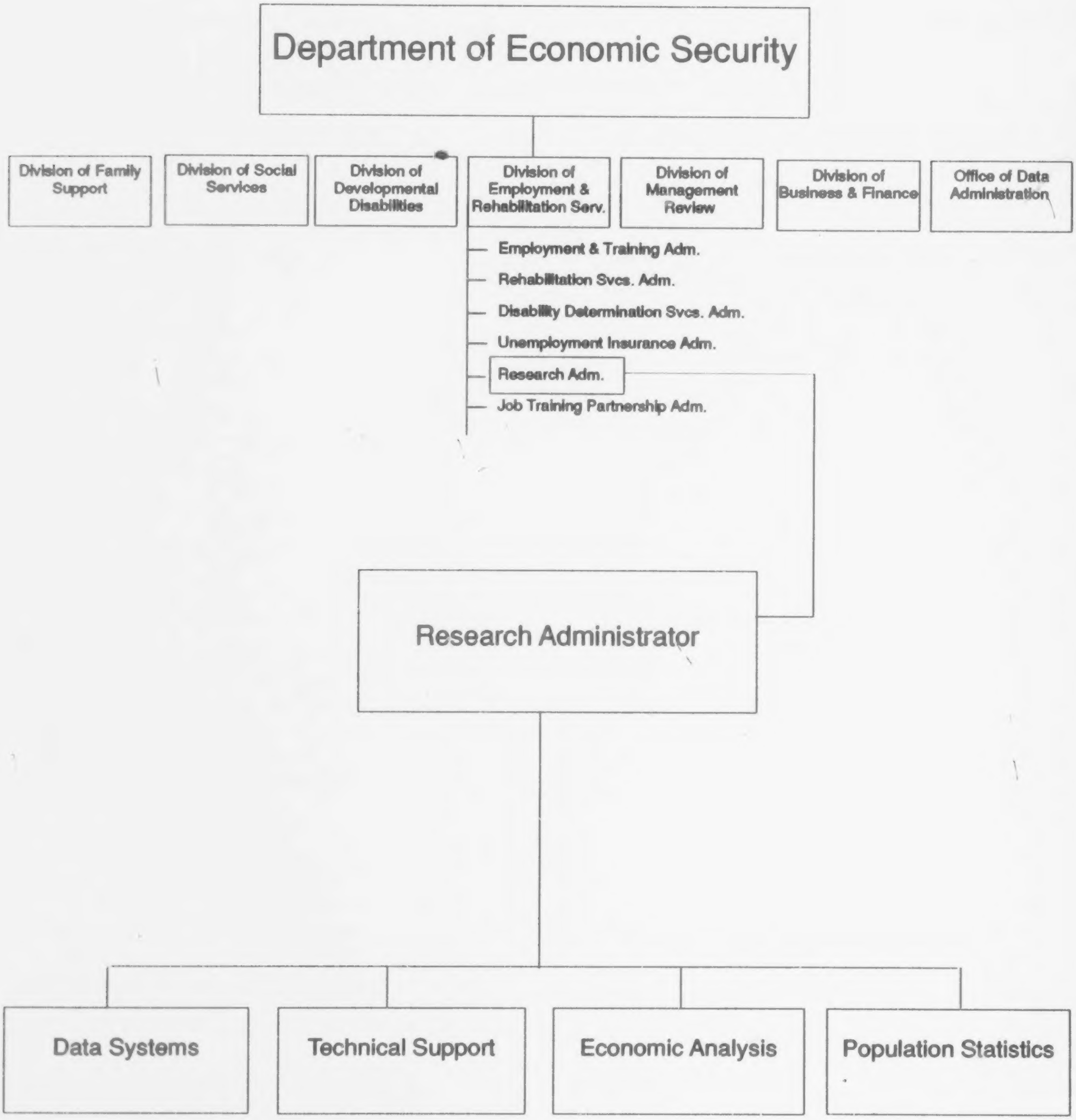
--improved resource utilization. By bringing together a staff with similar skills (data analysis, word processing), it's easier to allocate resources and develop cross-training programs.

--added credibility in analysis of how other programs (Job Training Partnership Act, Unemployment Insurance, Job Service) are performing certain phases of their work.

Forming a separate RA division, however, was no assurance of success. Early in DES history a similar "Research" unit had been formed, but it failed and was disbanded, in part because of the inclusion of programs that did not involve research activities, a Sept. 30, 1982, report concluded.

Most of those problems could be overcome, the report added, "by more carefully sorting out research ingredients... ." The agency agreed and on April 1, 1984, RA was officially "open for business."

(Continued on page 4)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Office of Data Administration
Employment & Training Adm.
Rehabilitation Svcs. Adm.
Disability Determination Svcs. Adm.
Unemployment Insurance Adm.
Research Adm.
Job Training Partnership Adm.
Research Administrator
Data Systems
Technical Support
Economic Analysis
Population Statistics

Figure 1. DES, Research Administration, Organizational Chart

(Continued from page 2)

The four units that make up RA are Data Systems, Economic Analysis, Technical Support, and Population Statistics (see Figure 1, page 5).

All of these divisions, except Population Statistics, are funded and overseen by two U.S. Department of Labor divisions -- the Bureau of Labor Statistics (BLS), and the Employment and Training Administration (ETA). Because of this, RA works closely with the BLS and ETA, and is reviewed annually by those agencies.

Following is a brief review of each unit's function, with a more detailed look at each division coming in the next several issues.

> "As much as anything, the organizational change has produced a real change in attitudes."
>
> *–Dan Anderson, Research Administrator*

Data Systems, comprised of several programs, is responsible for collection and compilation of data pertaining to job activity and the economic environment.

The Current Employment Statistics (CES) program collects data on employment, as well as average hours worked and average earnings in major industries in Arizona. The Local Area Unemployment Statistics (LAUS) program estimates monthly unemployment rates for the state, counties and selected sub-county areas. Another program under Data Systems is Occupational Employment Statistics (OES), which identifies occupational staffing patterns by industry. Finally, the ES-202 program tracks county-level employment and wage data made available through unemployment insurance reports.

RA's Economic Analysis unit focuses on analysis and dissemination of labor market information.

Economic Analysis produces a variety of publications for current and future job seekers and employers, plus this monthly newsletter, which includes in-depth labor and economic data, and analysis of topical labor market subjects. In addition, Economic Analysis holds a news conference each month to discuss the state's employment picture, and economists and research analysts are available daily to answer questions from the general public. Also housed under this unit is the Arizona State Occupational Information Coordinating Committee (ASOICC), which provides occupational and career data -- number of job openings, training requirements -- to educators and students, as well as to public agencies, interested groups and the general public.

The third component of RA is Technical Support, which contains technical staff in data processing, actuarial research and special projects.

Among Technical Support's functions is the compiling of data related to the Unemployment Insurance Trust Fund, determining if plants come under the Permanent Mass Layoff and Plant Closing (PMLPC) law, and providing research on contract to a number of users. Technical Support is also responsible for maintaining the department's computer equipment.

The final RA division is Population

(Continued on page 8)

REVISED ARIZONA POPULATION ESTIMATES, 1981-88

	1980*	1981	1982	1983	1984	1985	1986	1987	1988
County									
APACHE	52,108	54,300	55,800	57,900	59,300	61,900	63,100	64,900	66,300
COCHISE	85,686	88,200	89,200	89,900	92,100	92,900	96,000	99,300	101,500
COCONINO	75,008	78,300	80,300	82,500	84,600	86,800	89,500	91,900	94,400
GILA	37,080	39,000	39,900	39,800	39,500	39,900	40,900	41,400	41,900
GRAHAM	22,862	23,100	23,700	23,600	23,800	23,800	23,900	24,400	25,100
GREENLEE	11,406	11,300	11,300	10,600	10,200	9,500	9,000	8,900	8,700
LA PAZ	12,557	13,100	13,300	13,600	13,400	13,800	13,900	14,200	14,500
MARICOPA	1,509,175	1,574,000	1,614,400	1,649,200	1,726,400	1,829,500	1,910,000	1,979,000	2,035,500
MOHAVE	55,865	59,900	63,900	65,700	69,500	73,900	79,000	82,000	86,000
NAVAJO	67,629	69,500	71,400	73,600	75,700	77,500	79,100	80,600	82,100
PIMA	531,443	551,000	565,700	580,000	594,500	607,300	632,700	652,400	664,400
PINAL	90,918	93,700	96,200	97,300	98,700	101,100	105,200	107,900	110,300
SANTA CRUZ	20,459	21,300	22,200	22,600	23,200	24,100	25,100	26,800	28,700
YAVAPAI	68,145	72,400	75,100	77,200	79,500	83,100	87,300	90,700	94,500
YUMA	76,205	79,100	80,600	82,600	84,000	86,200	88,700	92,100	94,500
TOTAL (ARIZ.)	2,716,546	2,828,200	2,903,000	2,966,100	3,074,400	3,211,300	3,343,400	3,457,200	3,548,400
Incorporated Places									
Apache Junction	9,935	10,550	11,595	12,770	13,820	14,340	15,555	16,440	17,385
Avondale	8,168	8,205	8,270	8,575	9,240	9,610	10,175	10,605	11,405
Benson	4,190	4,200	4,250	3,800	3,750	3,725	3,770	3,810	3,885
Bisbee	7,154	7,225	7,290	7,365	7,425	7,350	7,650	7,730	7,775
Buckeye	3,434	3,535	3,640	3,640	3,645	3,755	3,840	3,950	3,970
Bullhead City	10,719	11,600	12,500	14,400	16,350	17,720	19,800	21,900	23,710
Camp Verde	3,824								5,940
Carefree	964	——	——	——	——	1,500	1,585	1,615	1,670
Casa Grande	14,971	15,205	15,440	15,550	15,600	15,695	17,490	18,035	18,685
Cave Creek	1,712							2,410	2,580
Chandler	29,673	32,930	36,365	40,640	48,535	60,725	72,910	77,225	81,690
Chino Valley	2,858	3,040	3,230	3,370	3,610	3,785	3,970	4,120	4,350
Clarkdale	1,512	1,530	1,550	1,585	1,610	1,640	1,860	2,065	2,130
Clifton	4,245	4,135	4,030	3,925	3,790	3,675	3,640	3,560	3,605
Colorado City	1,439						2,100	2,100	2,100
Coolidge	6,851	6,865	6,875	6,910	6,850	6,840	6,850	6,895	6,945
Cottonwood	4,550	4,675	4,725	4,795	4,950	5,055	5,215	5,370	5,435
Douglas	13,058	13,300	13,500	13,400	13,370	13,370	13,600	13,850	14,135
Duncan	603	600	595	600	595	600	600	600	605
Eagar	2,791	3,050	3,300	3,690	3,850	4,000	4,190	4,375	4,630
El Mirage	4,307	4,225	4,040	3,990	3,950	3,920	3,910	3,970	3,995
Eloy	6,240	6,150	6,040	6,025	5,960	5,860	5,910	5,940	6,100
Flagstaff	34,743	35,080	35,350	35,700	36,200	38,600	40,225	40,900	42,000
Florence	3,391	3,420	3,640	6,120	6,150	6,125	6,280	6,350	6,815
Fredonia	1,040	1,075	1,105	1,185	1,205	1,245	1,290	1,315	1,330

(Continued on page 6)

Since late last year, methods and techniques for estimating population in Arizona have been reviewed and revised. The new population estimates for the state, counties, and incorporated communities (above and page 6) are the result of those efforts and will be used by all state agencies.

Because of changed methods, the data have been revised back to the 1980 U.S. census. In nearly all cases, the changes were relatively small, but were important to ensure consistent data over time and between areas.

The estimates show a marked slowdown in Arizona's population growth the past several years, from a peak of 4.5 percent in 1985. In 1988, population growth was 2.6 percent. Maricopa County continues to dominate the state's other 14 counties, with 57.4 percent (2,035,500) of Arizona's population. And Greenlee County is the state's smallest county with 0.2 percent (8,700) of the total population.

Population estimates for 1989 will be prepared and reviewed this fall, with approved figures being released in December.

REVISED ARIZONA POPULATION ESTIMATES, 1981-88 (Cont.)

	1980*	1981	1982	1983	1984	1985	1986	1987	1988
Incorporated Places (Cont.)									
Gila Bend	1,585	1,700	1,785	1,830	1,910	1,980	2,000	2,005	2,005
Gilbert	5,717	5,925	6,130	6,390	8,370	11,355	14,355	16,770	20,395
Glendale	97,172	99,590	101,550	103,530	109,370	119,790	127,000	135,745	140,730
Globe	6,886	7,000	7,300	7,000	6,710	6,400	6,285	6,275	6,265
Goodyear	2,747	2,835	4,025	4,150	4,355	4,550	4,645	4,665	4,835
Guadalupe	4,506	4,530	4,550	4,570	4,580	4,600	4,650	4,720	4,800
Hayden	1,205	1,185	1,160	1,135	1,110	1,090	1,070	1,060	1,055
Holbrook	5,785	5,795	5,820	5,800	5,850	5,875	5,915	5,955	5,970
Huachuca City	1,661	1,785	1,900	1,960	2,050	2,070	2,170	2,175	2,215
Jerome	420	425	435	445	455	470	475	485	495
Kearny	2,646	2,570	2,510	2,470	2,400	2,415	2,430	2,455	2,500
Kingman	9,257	9,555	9,845	9,965	10,225	10,535	10,800	11,510	12,345
Lake Havasu City	15,909	16,650	17,350	17,400	17,675	18,400	19,075	19,775	21,060
Litchfield Park	3,657	____	____	____	____	____	____	3,835	4,055
Mammoth	1,906	1,900	1,900	1,885	1,875	1,775	1,800	1,850	1,875
Marana	1,674	1,665	1,650	1,640	1,630	1,615	2,000	2,260	2,510
Mesa	152,404	162,900	171,440	180,500	189,950	229,660	250,700	264,255	269,440
Miami	2,716	2,735	2,775	2,625	2,575	2,520	2,485	2,455	2,480
Nogales	15,683	15,805	15,930	16,075	16,180	16,230	16,465	16,710	16,725
Oro Valley	1,489	1,480	1,480	1,575	1,800	2,975	3,700	4,495	5,255
Page	4,907	5,260	5,615	5,940	6,340	6,600	6,820	7,055	7,190
Paradise Valley	11,085	11,250	11,435	11,440	11,450	11,500	11,740	11,735	11,880
Parker	2,542	2,540	2,530	2,520	2,510	2,500	2,800	2,970	3,035
Patagonia	980	1,005	1,030	1,045	1,050	1,065	1,100	1,110	1,115
Payson	5,068	5,500	5,925	6,235	6,620	7,040	7,350	7,420	7,940
Peoria	12,307	13,070	13,550	17,515	21,110	26,300	31,740	35,585	39,660
Phoenix	789,704	803,700	815,350	828,500	849,325	875,175	904,975	926,865	955,695
Pima	1,599	1,630	1,655	1,670	1,695	1,725	1,760	1,780	1,815
Pinetop-Lakeside	2,315	2,320	2,330	2,350	2,365	2,385	2,500	2,635	2,725
Prescott	19865	20,320	20,540	20,845	21,180	21,535	22,150	22,700	23,960
Prescott Valley	2,284	2,800	3,430	4,135	4,920	5,550	6,160	6,975	7,710
Safford	7,010	7,130	7,090	7,075	7,060	7,100	7,140	7,165	7,215
St. Johns	3,368	3,470	3,570	3,650	3,740	3,860	3,930	4,000	4,070
San Luis	1,946	2,120	2,290	2,370	2,575	2,740	3,000	3,500	3,935
Scottsdale	88,622	89,750	91,315	93,465	97,175	106,195	115,035	118,905	125,335
Sedona	5,319	____	____	____	____	____	____	____	7,325
Show Low	4,298	4,450	4,580	4,720	4,850	5,010	5,220	5,350	5,460
Sierra Vista	24,937	25,670	26,115	27,180	28,185	28,790	31,680	32,930	34,590
Snowflake	3,510	3,530	3,555	3,575	3,600	3,640	3,690	3,765	3,840
Somerton	3,969	4,125	4,235	4,340	4,325	4,350	4,510	4,580	4,640
South Tucson	6,554	6,450	6,400	6,300	6,200	6,040	6,030	6,510	6,535
Springerville	1,452	1,550	1,620	1,700	1,765	1,860	1995	2,045	2,125
Superior	4,600	4,530	4,470	4,300	4,270	4,220	4,200	4,210	4,230
Surprise	3,723	3,805	3,850	3,890	3,900	4,005	4,200	4,800	5,405
Taylor	1,915	1,930	1,945	1,960	1,970	1,990	2,015	2,030	2,040
Tempe	106,920	110,280	114,020	116,935	123,700	131,095	137,780	141,035	144,445
Thatcher	3,374	3,460	3,435	3,435	3,405	3,405	3,495	3,550	3,660
Tolleson	4,433	4,395	4,395	4,380	4,365	4,425	4,670	4,755	4,830
Tombstone	1,632	1,715	1,800	1,765	1,775	1,790	1,805	1,830	1,845
Tucson	330,537	337,125	343,790	345,730	355,810	360,855	369,475	382,725	397,300
Wellton	911	915	910	895	920	920	950	975	995
Wickenburg	3,535	3,570	3,615	3,665	3,810	3,895	4,000	4,035	4,065
Willcox	3,243	3,310	3,380	3,400	3,445	3,480	3,510	3,575	3,660
Williams	2,266	2,310	2,350	2,355	2,355	2,360	2,370	2,375	2,420
Winkelman	1,060	1,105	1,150	1,100	1,050	1,000	995	970	970
Winslow	7,921	8,050	8,190	8,300	8,500	8,700	8,750	8,810	8,835
Youngtown	2,254	2,255	2,245	2,250	2,280	2,285	2,315	2,375	2,385
Yuma	42,481	43,325	44,145	44,915	45,960	46,455	48,500	49,550	50,755

* All data, except 1980, are based on July 1 of that year. 1980 data are U.S. census figures, which are based on April 1 data.

Notes: Data prior to 1988 were revised to be consistent with the 1980 U.S. census, the 1985 special census where appropriate, and 1988 approved estimates.

A dash (____) indicates a community was not incorporated during that year.

Source: Arizona Department of Economic Security, Office of the Director, April 1989; Table prepared by the Population Statistics Unit of DES, Research Administration.

OIS Publications Detail Job Service Activity

The Occupational Information System (OIS) of Arizona has released three reports on 1988 Department of Economic Security Job Service activity.

The data are presented by Dictionary of Occupational Titles (DOT) code, with separate publications for Maricopa and Pima counties, nonmetropolitan counties, and the state as a whole. The reports include data on applicants, Unemployment Insurance claimants, Job Service openings, and average hourly wages.

New OIS Reports

- OIS Report 89-7-ST: 1988 Job Service Data -- Statewide
- OIS Report 89-7-MP: 1988 Job Service Data -- Maricopa and Pima Counties
- OIS Report 89-7-BOX: 1988 Job service Data -- All Counties Except Maricopa

In each publication, the related Standard Occupational Classification (SOC) and OIS Cluster codes are shown for each DOT occupation. Using these codes, the following additional information is available through the MICRO OIS data base.*

--one-page career profile printout for a SOC occupation, which includes the specified DOT occupation.

--supply-demand report for the OIS cluster code, which includes the specified DOT code.

In addition to the SOC and OIS codes, the OIS reports also include the Guide for Occupational Exploration (GOE) code, which identifies the interest and work areas associated with the DOT occupation.

For more information about the MICRO OIS and other OIS data, contact Hugo H. Soll, Ph.D., Manager, OIS of Arizona, Site Code 897J, P.O. Box 6123, Phoenix, Arizona 85005; (602) 542-3680.

**The MICRO OIS is a microcomputer data base designed to serve the needs of career counselors and vocational planners in Arizona's high schools and community colleges. The MICRO OIS is available at no cost to public and nonprofit institutions.*

LMI Publications -- Hot off the Press

The following revised publications prepared by DES, Research Administration can be ordered by writing to the address on the back of this newsletter or by calling (602) 542-3871. One copy of each publication will be sent at no charge. Multiple copies are available at a nominal charge. DES offices can order directly from supply.

The latest edition of *Jobs for Which You Can Qualify If You're Not a High School Graduate* (PAL-114) is available. This publication is one of a series of books describing occupations available to persons who lack a high school degree and with various educational backgrounds.

Included in each book are job requirements; information on talents, aptitudes, and interests that these

(Continued on page 8)

(Continued from page 7)

occupations demand; and the national employment outlook for these jobs through the mid-1990s. An added feature in this edition is a table on employment opportunities within Arizona.

The 1989-1990 edition of the *Annual Planning Information (API)* guide (PAL-327) contains projections for population, labor force, persons in poverty, limited English-proficient population, and persons with work disabilities.

Current data on veterans, offenders, Unemployment Insurance recipients, and other groups are also included. Many of the tables are broken down by age, sex, race, and Hispanic ethnicity.

Since the publication was designed primarily for the Job Training Partnership Act (JTPA) program, much of the data are arranged for the state as a whole and by JTPA Service Delivery Area. Some of the information is by county.

The *API* guide can be used for program planning and evaluation, resource allocation, job development, and vocational counseling. Supplements covering unskilled workers and high school dropouts are available on request.

The *1988 Employer Wage Survey* provides wage data on occupations at companies employing at least 50 workers. The publication details: hourly low, high, and weighted-average wages; fringe benefits; and occupational definitions.

Separate books are available for Maricopa (PAL-338) and Pima (PAL-341) counties, plus additional wage data sheets are available for the categories, nonmetropolitan counties, and state as a whole.

Fringe-benefit data and part of the wage data are based on the Joint Governmental Salary and Benefits Survey conducted by the Arizona Department of Administration, Personnel Division. Other wage data are from a survey by DES, Research Administration.

Creation of Research Administration Simplifies Data-Gathering Process

(Continued from page 4)

Statistics. This unit prepares the official population estimates and projections for the state and counties, plus coordinates the U.S. Census Bureau's State Data Center program. In addition to population figures, the State Data Center also compiles information from the U.S. Census Bureau on Arizona housing, industry and government.

While meshing a variety of research programs into a cohesive unit has not been easy, Anderson believes RA has, for the most part, fulfilled its initial goals.

"(Research Administration) has had its ups and downs, but I think it has been worth it," Anderson wrote last year in a letter to another state considering forming a similar organization. "The professional level of the staff has improved and our credibility in the community has soared.

(Continued on page 9)

(Continued from page 8)

"As much as anything, the organizational change has produced a real change in attitudes. Instead of a numbers-in-boxes approach to work, the staff sees how their work impacts not only on other activities in Research, but how it is used in the network of users that has developed."

The May issue of the Arizona LMI Newsletter will focus on RA's Economic Analysis unit.

--Brent Fine

The Arizona Labor Force in February

Arizona's unemployment rate climbed 0.2 percent to 5.9 percent in February.

While February brought above-average labor force growth (22,700) in Arizona, the rate of job creation was only average, at 1.3 percent or 18,000 wage and salary jobs. The genuinely good news, however, was that only one industry continued to lose jobs in the state, unlike in January when five out of eight major industry groups posted losses.

Construction dropped another 700 jobs, continuing its downward path from peak employment in July 1986. But Finance, Insurance, and Real Estate (FIRE), which had joined Construction's decline, posted a gain of 200.

FIRE employment peaked at 95,600 in July 1987 and has been losing jobs continuously since March 1988. Nevertheless, February's turn is unlikely to hold, since interest rates are still climbing. Construction and FIRE are expected to continue losing employment until interest rates decline.

Manufacturing, too, has been losing employment each month since at least September 1988, but posted a gain of 300 in February. Most of the increase was in nondurable goods, primarily printers. Among durable-goods manufacturers, nonelectrical machinery (which includes computer makers) also posted gains. All of the employment gain in Manufacturing was in Maricopa County; enough, in fact, to counterbalance losses in Pima and the nonmetropolitan counties.

Research Administration expects more job growth in Manufacturing over the year. Recent announcements from Tucson promise a near reversal of the Pima County manufacturing decline.

Trade was the star performer for the month, adding 2,000 jobs, an unseasonably high number. The average February gain during the last five years has been 600 jobs.

Both wholesale trade and retail trade had better-than-average performances. Wholesale trade added 600 jobs, or twice the usual number. Retail trade came in strong with 1,400 new jobs, about 1,000 above the average February gain.

Although eating and drinking places had most of the actual gain (1,900), it was department stores that made the difference in the retail industry group. Department stores lost 800 jobs, but that was 1,000 fewer than its average losses for the month.

Trade's greater-than-average February gain was partially counterbalanced by Services' less-than-average gain. Services added 3,800 jobs,

(Continued on page 14)

Arizona Labor Force and Employment

February 1989 (in thousands)

	Arizona				
				Amount Change	
	Feb.* 1989	Jan. 1989	Feb. 1988	Jan.- Feb.	1988- 1989
TOTAL CIVILIAN LABOR FORCE**	1684.9	1662.2	1613.1	+22.7	+71.8
Total Unemployment	98.7	95.2	90.1	+3.5	+8.6
Rate	5.9	5.7	5.6	----	----
Rate (Sea. Adj.)***	5.9	5.7	5.6	----	----
Total Employment	1586.2	1567.0	1523.0	+19.2	+63.2

The Above Labor Force Statistics Shou

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Feb.* 1989	Jan. 1989	Feb. 1988	Jan.- Feb.	1988- 1989
TOTAL WAGE AND SALARY	1427.9	1409.9	1413.0	+18.0	+14.9
Manufacturing	189.2	188.9	188.1	+0.3	+1.1
Durable Goods	145.6	145.7	145.4	-0.1	+0.2
Stone, Clay, and Glass	7.4	7.5	7.7	-0.1	-0.3
Primary and Fabricated Metals	15.9	15.8	15.4	+0.1	+0.5
Primary Metals	7.7	7.6	7.4	+0.1	+0.3
Fabricated Metals	8.2	8.2	8.0	+0.0	+0.2
Machinery	65.4	65.4	66.0	+0.0	-0.6
Other Durable Goods	56.9	57.0	56.3	-0.1	+0.6
Aircraft and Missiles	26.2	26.2	26.6	+0.0	-0.4
Lumber and Wood Product (Excluding Furniture)	8.2	8.4	7.8	-0.2	+0.4
All Other Durable Goods	22.5	22.4	21.9	+0.1	+0.6
Nondurable Goods	43.6	43.2	42.7	+0.4	+0.9
Food and Kindred Products	9.2	9.2	9.1	+0.0	+0.1
Apparel	4.6	4.5	4.7	+0.1	-0.1
Printing and Publishing	16.9	16.7	16.6	+0.2	+0.3
All Other Nondurable Goods	12.9	12.8	12.3	+0.1	+0.6
Mining and Quarrying	12.3	12.2	11.7	+0.1	+0.6
Copper Mining	9.1	9.0	8.7	+0.1	+0.4
Other Mining and Quarrying	3.2	3.2	3.0	+0.0	+0.2
Construction	88.6	89.3	92.3	-0.7	-3.7
Trans., Communications, & Public Utilities	72.8	72.3	73.4	+0.5	-0.6
Transportation	36.2	36.3	36.9	-0.1	-0.7
Communications and Public Utilities	36.6	36.0	36.5	+0.6	+0.1
Trade	354.8	352.8	347.0	+2.0	+7.8
Wholesale Trade	68.9	68.3	67.9	+0.6	+1.0
Retail Trade	285.9	284.5	279.1	+1.4	+6.8
General Merchandise and Apparel	43.9	44.7	42.5	-0.8	+1.4
Food Stores	48.0	47.9	46.2	+0.1	+1.8
Automotive and Service Stations	34.8	34.6	33.2	+0.2	+1.6
Eating and Drinking Places	100.3	98.4	99.0	+1.9	+1.3
Other Retail Trade	58.9	58.9	58.2	+0.0	+0.7
Finance, Insurance, and Real Estate	91.2	91.0	94.3	+0.2	-3.1
Services and Miscellaneous	366.5	362.7	360.6	+3.8	+5.9
Hotels and Other Lodging Places	41.7	41.2	40.2	+0.5	+1.5
Business Services	77.3	76.1	77.8	+1.2	-0.5
Health Services	92.2	91.8	89.9	+0.4	+2.3
Other Services	155.3	153.6	152.7	+1.7	+2.6
Government	252.5	240.7	245.6	+11.8	+6.9
Federal	43.3	43.5	43.0	-0.2	+0.3
State and Local	209.2	197.2	202.6	+12.0	+6.6
School	119.8	108.6	118.6	+11.2	+1.2

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

February 1989 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
Feb.* 1989	Jan. 1989	Feb. 1988	Jan.- Feb.	1988- 1989	Feb.* 1989	Jan. 1989	Feb. 1988	Jan.- Feb.	1988- 1989
1043.0	1030.0	1002.6	+13.0	+40.4	319.0	314.2	305.5	+4.8	+13.5
50.3	49.4	46.4	+0.9	+3.9	16.1	14.8	14.3	+1.3	+1.8
4.8	4.8	4.6	---	---	5.0	4.7	4.7	---	---
4.8	4.7	4.6	---	---	5.0	4.6	4.6	---	---
992.7	980.6	956.2	+12.1	+36.5	302.9	299.4	291.2	+3.5	+11.7

Not Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

939.6	929.0	933.0	+10.6	+6.6	250.9	248.2	249.5	+2.7	+1.4
138.3	137.9	136.9	+0.4	+1.4	29.5	29.7	30.8	-0.2	-1.3
108.0	107.8	106.8	+0.2	+1.2	23.7	23.9	25.1	-0.2	-1.4
4.9	5.0	5.0	-0.1	-0.1					
10.5	10.4	10.3	+0.1	+0.2					
52.6	52.4	52.6	+0.2	+0.0					
40.0	40.0	38.9	+0.0	+1.1					
30.3	30.1	30.1	+0.2	+0.2	5.8	5.8	5.7	+0.0	+0.1
5.9	5.9	6.0	+0.0	-0.1					
3.5	3.5	3.4	+0.0	+0.1					
11.9	11.7	11.9	+0.2	+0.0					
9.0	9.0	8.8	+0.0	+0.2					
0.7	0.7	0.8	+0.0	-0.1	2.0	2.0	1.7	+0.0	+0.3
61.1	61.6	63.5	-0.5	-2.4	16.0	16.1	17.2	-0.1	-1.2
50.4	50.3	50.6	+0.1	-0.2	9.0	9.0	9.3	+0.0	-0.3
26.9	26.9	26.8	+0.0	+0.1	4.5	4.5	4.8	+0.0	-0.3
23.5	23.4	23.8	+0.1	-0.3	4.5	4.5	4.5	+0.0	+0.0
240.5	239.0	235.9	+1.5	+4.6	57.7	57.5	56.7	+0.2	+1.0
55.0	54.8	54.0	+0.2	+1.0	6.9	6.8	6.9	+0.1	+0.0
185.5	184.2	181.9	+1.3	+3.6	50.8	50.7	49.8	+0.1	+1.0
27.8	28.2	27.8	-0.4	+0.0	7.5	7.7	7.3	-0.2	+0.2
31.4	31.2	29.7	+0.2	+1.7	8.0	8.1	8.1	-0.1	-0.1
22.2	22.0	20.8	+0.2	+1.4	5.5	5.5	5.4	+0.0	+0.1
64.6	63.2	63.8	+1.4	+0.8	18.5	18.2	18.5	+0.3	+0.0
39.5	39.6	39.8	-0.1	-0.3	11.3	11.2	10.5	+0.1	+0.8
72.8	72.6	75.1	+0.2	-2.3	11.7	11.8	12.3	-0.1	-0.6
246.7	244.1	243.5	+2.6	+3.2	69.7	68.8	68.5	+0.9	+1.2
25.3	25.0	23.9	+0.3	+1.4	7.0	6.8	7.3	+0.2	-0.3
60.2	59.4	61.6	+0.8	-1.4	11.7	11.5	11.3	+0.2	+0.4
60.1	59.8	58.9	+0.3	+1.2	19.9	19.8	19.3	+0.1	+0.6
101.1	99.9	99.1	+1.2	+2.0	31.1	30.7	30.6	+0.4	+0.5
129.1	122.8	126.7	+6.3	+2.4	55.3	53.3	53.0	+2.0	+2.3

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
February 1989

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	15,275	35,000	42,850	12,675	8,400	2,975	5,475
Total Unemployment	2,500	2,750	3,775	1,525	750	250	500
Rate	16.4%	7.9%	8.8%	12.0%	8.9%	8.4%	9.1%
Rate (Seas. Adj.)**	15.9%	7.0%	8.5%	10.6%	8.3%	8.1%	8.2%
Total Employment	12,775	32,250	39,075	11,150	7,650	2,725	4,975

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	14,650	25,250	38,100	10,625	5,350	2,900	3,750
Manufacturing	775	1,250	2,700	1,325	200	75	350
Mining & Quarrying	50	100	150	1,300	0	1,575	125
Construction	650	825	1,350	600	225	200	200
T.C.P.U.	1,950	1,625	3,075	350	150	50	50
Trade	1,400	5,775	8,575	2,100	1,450	225	1,250
F.I.R.E.	300	700	750	275	100	25	100
Services & Misc.	4,200	4,825	9,550	2,050	900	150	900
Government	5,325	10,150	11,950	2,625	2,325	600	775

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	32,150	26,650	39,275	10,700	37,325	54,175
Total Unemployment	1,875	3,675	3,100	1,175	2,525	7,900
Rate	5.8%	13.8%	7.9%	11.0%	6.8%	14.6%
Rate (Seas. Adj.)**	5.2%	12.7%	7.7%	15.8%	5.9%	22.5%
Total Employment	30,275	22,975	36,175	9,525	34,800	46,275

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	22,550	19,525	31,225	10,000	25,100	28,350
Manufacturing	2,950	1,875	4,175	1,325	2,175	2,200
Mining & Quarrying	200	1,150	3,700	0	1,100	50
Construction	1,775	800	1,425	350	1,875	1,325
T.C.P.U.	1,125	1,700	925	550	900	1,025
Trade	6,700	3,750	5,525	4,150	6,750	8,850
F.I.R.E.	1,000	375	800	275	950	1,050
Services & Misc.	5,100	4,525	4,350	1,650	5,650	6,275
Government	3,700	5,350	10,325	1,700	5,700	7,575

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Feb.* 1989	Jan. 1989	Feb. 1988	Feb.* 1989	Jan. 1989	Feb. 1988	Feb.* 1989	Jan. 1989	Feb. 1988
Manufacturing	406.07	402.46	398.37	41.1	40.9	40.9	9.88	9.84	9.74
Aircraft & Missiles	603.46	592.30	INA	44.8	44.5	INA	13.47	13.31	INA
Food & Kindred Prod.	337.82	345.02	361.17	40.8	40.4	39.3	8.28	8.54	9.19
Primary Metals	503.88	505.72	451.91	39.0	40.2	38.2	12.92	12.58	11.83
Machinery	404.00	395.20	403.66	40.4	40.0	41.7	10.00	9.88	9.68
Copper Mining	533.39	544.83	511.70	41.9	42.9	41.5	12.73	12.70	12.33
Construction	420.79	415.24	419.37	35.6	35.4	35.6	11.82	11.73	11.78
Utilities	699.37	674.00	613.30	45.8	43.4	41.3	15.27	15.53	14.85
Retail Trade**	246.78	240.96	244.94	32.6	32.0	32.4	7.57	7.53	7.56
Wholesale Trade	377.45	367.09	384.54	39.9	38.6	39.0	9.46	9.51	9.86

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Feb.* 1989	Jan. 1989	Feb. 1988	Feb.* 1989	Jan. 1989	Feb. 1988	Feb.* 1989	Jan. 1989	Feb. 1988
Manufacturing	438.24	430.35	432.63	41.5	41.3	41.4	10.56	10.42	10.45
Construction	442.38	436.69	432.18	36.5	36.3	35.6	12.12	12.03	12.14
Retail Trade**	270.61	267.87	268.59	33.7	33.4	33.2	8.03	8.02	8.09
Wholesale Trade	387.30	384.54	404.79	39.4	39.0	39.3	9.83	9.86	10.30

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Feb.* 1989	Jan. 1989	Feb. 1988	Feb.* 1989	Jan. 1989	Feb. 1988	Feb.* 1989	Jan. 1989	Feb. 1988
Manufacturing	369.02	369.40	374.79	38.6	38.6	39.0	9.56	9.57	9,61
Copper Mining	595.95	615.55	539.75	43.5	44.8	42.3	13.70	13.74	12.76
Construction	388.98	386.45	369.60	36.8	36.7	35.2	10.57	10.53	10.50
Utilities	585.62	599.65	580.03	41.8	41.1	42.4	14.01	14.59	13.68

* Preliminary
** Excludes eating and drinking places

NOTE: These estimates are based on a sample of full-time and part-time production and related employees whose payroll and hours are reported for the pay period that includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs February 1989

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,684,907	1,586,178	98,729	5.9%
Apache	15,275	12,768	2,507	16.4
Cochise	34,993	32,253	2,740	7.8
Coconino	42,838	39,064	3,774	8.8
Gila	12,662	11,136	1,526	12.1
Graham	8,402	7,659	743	8.8
Greenlee	2,971	2,726	245	8.2
La Paz	5,465	4,971	494	9.0
Maricopa	1,043,000	992,671	50,329	4.8
Mohave	32,157	30,284	1,873	5.8
Navajo	26,643	22,979	3,664	13.8
Pima	319,017	302,882	16,135	5.1
Pinal	39,273	36,182	3,091	7.9
Santa Cruz	10,714	9,535	1,179	11.0
Yavapai	37,311	34,791	2,520	6.8
Yuma	54,185	46,276	7,909	14.6

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in February

(Continued from page 9)

while 4,600 is normal. Hotels picked up only half the average seasonal gain of 1,000.

Business services and health services posted normal seasonal gains (1,200 and 400), but "other services" -- which includes the following categories: personal, repair, legal, recreational, and educational -- only added 1,700, a less-than-seasonal amount.

Government, as well as Transportation, Communications, and Public Utilities (TCPU), had normal seasonal February increases. TCPU added 500 jobs, more than half its January loss, while Government added back all but 100 of the 11,900 it had lost in January. (Government gains primarily reflect spring semester school employment gains after the Christmas recess.) TCPU, however, may be slow in recovering the additional 400 jobs lost in January, given Salt River Project's announcement of an impending layoff of 1,000.

In summary, February was a reasonably positive month -- despite a more-than -seasonal gain in unemployment -- with employment gains in all industries except Construction .

-- Ron Simon

BLS Articles Focus on Temporary Work Force

The temporary work force earned an average of $6.42 an hour in September 1987 with the pay for individual "temps" ranging from $3.35 an hour to $20 an hour or more, according to a recent study of pay and benefits of temporary workers.

The study, in the March issue of *Monthly Labor Review*, also says that because of their intermittent work schedules, temporaries often have more difficulty than full-time permanent staff in meeting eligibility requirements for benefits related to length of service. The *Monthly Labor Review* is published by the U.S. Bureau of Labor Statistics.

The BLS study covers average hourly earnings, plus the number of temporary workers in temporary help supply establishments, selected occupational categories, and selected large metropolitan areas.

In addition to the study, a separate article in the March *Monthly Labor Review* discusses corporations' shift toward using more temporary help.

The story's author, Richard S. Belous, vice president and senior economist for the National Planning Association, says that the dramatic increase of workers who do not have strong ties to their employers, such as temporary workers and consultants, has caused corporations to make major institutional changes in their human resource systems; the net result has created benefits as well as costs.

The *Monthly Labor Review* is sold by the U.S. Government Printing Office, Washington, D.C. 20402, for $20 a year; single copies are $5 apiece. Make checks payable to the Superintendent of Documents.

More information is available on the temporary work force in Arizona in the February 1988 issue of the Arizona LMI Newsletter.

Illegal Aliens Eligible for Minimum Wage

The U.S. Supreme Court has refused to review a federal appeals court decision that says illegal aliens are entitled to protection under the minimum wage laws.

The high court denied certiorari in *Patel vs. Quality Inn South*, where the U.S. Court of Appeals for the 11th Circuit held that aliens are entitled to receive the federal minimum wage whether or not they are in the United States legally.

The case involved an illegal alien, Rajni Patel, who sued the Quality Inn South of Birmingham, Ala., under the Fair Labor Standards Act (FLSA), saying the hotel paid him a sub-minimum wage.

In June 1987, the U.S. District Court for Northern Alabama ruled in favor of the motel, finding that passage of the Immigration Reform and Control Act of 1986 could be construed to deny certain law protections to illegal aliens. But the U.S. Appeals Court overturned the lower court decision in June 1988, finding that the FLSA covers all employees, with few exceptions. Illegal aliens are not one of

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those exceptions, the appeals court ruled.

The Supreme Court agreed, citing a 1984 ruling in *Sure-Tan vs. NLRB*, in which the court held that the National Labor Relations Act (NLRA) covers illegal aliens. Since the NLRA and FLSA are similar laws, the high court said illegal aliens are covered under FLSA.

The FLSA helps neutralize "the most attractive feature of illegal workers -- their willingness to work for less than minimum wage," the court said.

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported from these sources.

MANUFACTURING - In early March, **Imagineering Systems Corp**. of Irving, Texas, made it official when it announced it would operate an aircraft maintenance, modification and customer service facility at Tucson International Airport (see "New Developments," *Arizona LMI Newsletter*, March 1988). Imagineering, which will operate in 13 buildings previously used by Learjet Corp., expects to hire 200 technical and skilled workers initially with a potential to employ 1,000 people within three years.

March brought other good news for Tucson's manufacturing sector. **3M Corp**. announced it would take over from International Business Machines (IBM) production of magnetic tape cartridges used on the IBM 3480 Magnetic Tape Subsystem. 3M, which will hire 120 workers locally, becomes the first company to buy or lease a part of IBM's Rita Road manufacturing facility. IBM, which is moving 2,800 jobs from Tucson to other locations, will also manufacture the tape, but at its San Jose, Calif., facility. Meanwhile, **IBM** says it will transfer by mid-year 100 employees from its Boulder, Colo., plant, which is involved in development of system printer hardware. The workers will occupy part of the research and development section of the IBM plant, where 2,200 employees will be left at the end of 1989 when IBM phases out its manufacturing operation.

"Reduced missile production quantities and the need for more efficiency in light of tight competition" led **Hughes Aircraft** in Tucson to lay off 248 workers in the past month, the company says. In mid-March, Hughes let go 100 salaried workers; in early April, 148 hourly-paid assembly and maintenance hourly-paid assembly and maintenance employees. Employment at Hughes is now about 6,200.

Hamilton Aviation, which maintains and modifies commercial aircraft, says it will increase employment by 380 by 1991, bringing total employment to 500. Located at Tucson International Airport, Hamilton expects additional work due to recent federal action requiring airlines to upgrade their aging fleets.

(Continued on page 17)

(Continued from page 16)

Work has begun on a 280,000-square-foot facility in Chandler that will house **Space Data Corp**. The high-tech company, which currently employs 350 workers in Tempe, plans to produce the Pegasus rocket at the plant, which could eventually employ up to 2,500 workers. The Pegasus is designed to put satellites into orbit.

Ironite Products, in Humboldt, has increased employment by 49 with the opening of a 200,000-square-foot production facility. With the new plant, Ironite is capable of increasing its manufacturing of fertilizer from 20 to 600 tons a day.

McDonnell Douglas Corp. is studying the possibility of building a manufacturing plant on 640 acres near the Yuma International Airport. The St. Louis-based aerospace company recently completed a feasibility study and a master plan for the 640 acres. No decision on building a plant, however, has been made at this point, a company official says. McDonnell Douglas already runs a flight-development facility near the airport and has announced plans to add 200 temporary jobs to support testing of the MD-11 jetliner. The McDonnell Douglas official says it is not presently planning to move its manufacturing plant in Long Beach, Calif., to Yuma.

Kamar Corp. of Derry, N.H., has signed a letter of intent to buy **Optifab Inc**. of Tempe, which designs and manufactures aerospace interconnect systems. Optifab, which moved into a new 55,000-square-foot building at 1000 S. Priest last year, had $6 million in sales in 1988. None of the 120 employees are expected to be laid off, a Kamar official said.

TRADE - The closing of four **Federated** electronics stores in Phoenix (2), Tucson (1) and Mesa (1) laid off about 80 employees in early April. Federated's only other store in the state, on west Thunderbird Road inPhoenix, will remain open to service clients. The closures, due to poor performance and lack of retail management, reverse the Sunnyvale, Calif., company's plans to expand in Arizona, announced in December. Eleven stores in California and Texas are also being shut down.

Broadway-Southwest says it plans to open three additional stores in the metropolitan Phoenix area by 1992. New outlets are planned for the Paradise Valley Mall (1991), Superstition Springs Mall in Mesa (1991) and an unnamed location in Phoenix (1992). In addition, Broadway Southwest, owned by Carter-Hawley Hale Stores Inc., will remodel its existing five stores in Phoenix and two in Tucson.

Construction is under way on the $55 million **Superstition Springs Center**, at Power Road and the Superstition Freeway in Mesa. The 1.6 million-square-foot project, which will feature several major retailers and 125 stores that will employ 300 people, is expected to open in late 1990.

Sears, Roebuck and Co. is closing 24 regional administrative offices, including its Phoenix operation, as part of a national reorganization. About 70 workers at the Colonnade Mall will be offered a salary continuation package and early retirement (for those eligible). Sears says it will attempt to relocate laid off employees within the organization.

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(Continued from page 17)

A.J. Bayless Markets Inc. has given up plans to reopen the chain's 10 stores. Bayless had been operating under Chapter 11 protection of the Bankruptcy Act since February 1988. The 59-year-old company says it plans to sell the grocery chain instead of liquidating its assets.

Two national retail chains have announced plans to expand in rural areas of the state. **K Mart** will open a store in Green Valley (20 miles south of Tucson) next year, the company says. The 86,000-square-foot store will be located at Duval Mine Road near Interstate 19. Meanwhile, a **Wal-Mart** store is planned to open in Yuma early next year, creating 245 jobs. Wal-Mart's seventh store in Arizona will be located across from the Yuma County Fairgrounds.

Honda of Tempe and **Jack Ross Lincoln-Mercury** will open automobile dealerships in **Autoplex**, an auto mall development at Interstate 10 and Elliot Road in Tempe. SunCor Development Co., a subsidiary of Pinnacle West Corp., is developing the 145-acre Autoplex, which will feature space for 15 to 20 dealerships ranging in size from 2 to 20 acres.

FINANCE, INSURANCE and REAL ESTATE - Wells Fargo & Co. is eliminating its mortgage-lending subsidiary, **Wells Fargo Credit Corp.**, and with it 240 jobs in Scottsdale. The San Francisco-based Wells Fargo will terminate operations in May and transfer the loan portfolio to the parent company.

Building permits in Arizona dropped 10 percent in value in 1988, reports the Arizona Real Estate Center and Arizona State University's Center for Business Research. Building permits in the state totaled $4.6 billion in 1988, compared to $5.1 billion in 1987. In the state's major metropolitan areas, value of building permits sustained higher drops. Building permit value in Maricopa County (metropolitan Phoenix) fell 11 percent to $3.41 billion, and in Pima County (metropolitan Tucson), they dropped 22 percent to $464 million.

TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES - **Salt River Project** (SRP) is considering laying off up to 20 percent of its work force. The state's second largest utility announced in mid-March that a private consulting company is working on a plan that could lead to the elimination of as many as 1,000 jobs through early retirement, not filling positions, and layoffs. Management jobs are thought to be the primary target of the plan. Arizona Public Service, the state's largest utility, eliminated 922 positions in April 1988. A final decision by SRP is expected in May.

Executone Information Systems Inc. has chosen Scottsdale for location of its second national service center. The center, which will provide 24-hour service coverage to Executone's 125,000 customers, will employ 50 people, bringing the Darien, Conn., company's total Valley employment to 300.

Sprint Services plans to build a $5.5 million operator-services center in Tempe. Operations are expected to begin in October, with about 150 employees, then increase to 500 workers by 1992. Sprint Services, a subsidiary of United Telecommunications Inc., will provide operator

(Continued on page 19)

(Continued from page 18)

services for long-distance carrier US Sprint.

Phoenix-based **StatesWest Airlines** announced it will begin non-stop flights between Scottsdale Airport and Orange County, Calif., beginning in June. StatesWest, targeting primarily business travelers, will offer two daily round-trip flights Monday through Friday. StatesWest's flights, the first commercial flights to operate out of Scottsdale Airport, will be on 19-seat Beech 1900 aircraft.

Swift Transportation Co. Inc. of Phoenix has announced its intention to expand its facilities in three states and its college-based driver-training program at Rio Salado Community College. One of the largest privately held trucking firms in the United States, Swift says it will hire an additional 450 drivers this year -- a 40 percent increase in its staff -- and double the size of its Phoenix headquarters on West Mojave Street.

SERVICES AND MISCELLANEOUS - The Tucson economy received a welcome boost from **First Data Resources**, which plans to open a telecommunications-operator center by summer. First Data, a subsidiary of American Express Co. located in Omaha, Neb., will hire about 850 employees to offer a variety of telemarketing services, including processing bank credit cards. First Data's annual payroll in Tucson will be approximately $7 million.

The **Phoenix Airport Hilton**, which has 255 rooms, opened in March. Located at 2435 S. 47th St., near University Drive, the hotel is catering to the business traveler with features such as 11,000 square feet of meeting space and rooms equipped with computer ports.

MINING -- The **McCabe Gold Mine** in Humboldt has closed, eliminating 81 jobs. The operation will remain shutdown until additional capital can be found to implement a less costly mining technique, says the mine's backers, the Stan West Corp.

GENERAL -- Job prospects in the Phoenix area have been and will continue to be unfavorable, according to two national organizations. In 1988, Phoenix ranked between 80 and 100 in job growth, compared to a rank of 18 in 1987, says **MFP Research** of Dallas, which analyzes emmloyment trends. Phoenix had net job growth of 6,400 in 1988, compared to 28,000 in 1987, a drop of 77 percent, says MFP. Meanwhile, the *Employment Outlook Survey*, a quarterly survey from **Manpower Inc.**, says jobs openings in the Valley will stay about the same during the second quarter. The survey says 23 percent of Phoenix employers will expand their staff, 10 percent will reduce staff, and 67 percent will stay the same. Manpower Inc. is reportedly the largest temporary help service in the country.

Tourism revenue in Arizona dropped $1 billion in 1988 compared to 1987 levels, although the Tucson area showed a slight increase, according to data released by the **Metropolitan Tucson Convention and Visitors Bureau.** Statewide, 16.4 million people visited the state in 1988, the figures showed, spending $5.19 billion, compared to revenues of $6.2 billion the year before. Tourism revenue in Tucson increased from $1.5 to $1.6 billion over the year.

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XIII No. 5
May 1989

Unemployment Rate

Seasonally Adjusted
March*

ARIZONA	5.6%
Maricopa County	4.6%
Pima County	4.6%
UNITED STATES	5.1%

Consumer Price Index

U.S. - March 1989
Base = 1982-84

Wage Earner/Clerical Worker	120.8
% Chg. Year Ago	4.9
All Urban	122.3
% Chg. Year Ago	5.0

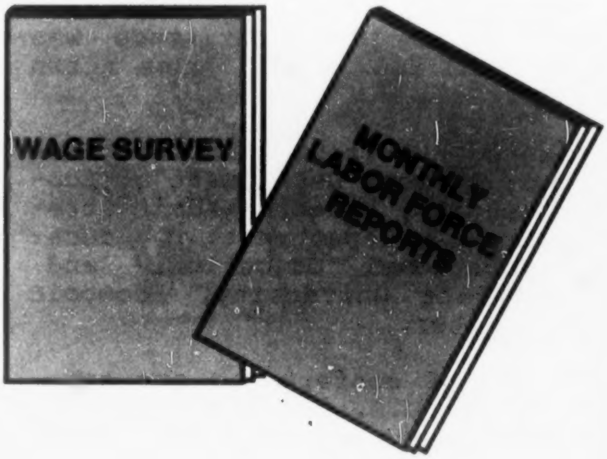
Phoenix - 1st Qtr 1988
Base = 1982-84

All Urban	123.7
% Chg. Year Ago	5.4

Tucson - 1st Qtr 1989
Base = 1982-84

All Urban	125.2
% Chg. Year Ago	3.6

* Preliminary



LMI DATA

— What Lies Ahead? P.2

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Conference Focuses on Role, Future of LMI Programs

In mid-April, Arizona representatives attended the fourth in a national series of regional Labor Market Information (LMI) conferences. The Western Region conference was held in Tiburon, Calif., just north of San Francisco.

Represented Arizona institutions included: Arizona Department of Economic Security, Research Administration; Arizona Department of Education, Vocational Education; and Arizona State University, Economic Outlook Center.

The series of conferences are sponsored by the U.S. Department of Labor's Employment and Training Administration (ETA), and the Northeast Midwest Institute (NMI) to provide guidance for LMI programs and ascertain if ETA should still have a role in LMI's administration.

Before the Job Training Partnership Act (JTPA) was instituted in late 1983, ETA directed the LMI program. Since then, the U.S. Bureau of Labor Statistics (BLS) has had primary authority for determining the program's content. The Northeast Midwest Institute is a research consulting firm (think tank) created by Congress in the late '70s to do joint research for states in economically depressed regions of the country, referred to as the Rustbelt.

LMI's Role in Policy-Making

Paula Duggin, Northeast Midwest Institute's senior policy analyst, gave the institute's view of LMI in its current form, and how it should be used by Congress.

LMI statistics, Duggin said, enable Congress to understand the nature of employment problems and to allocate federal funds by formula to states and localities in need. But with respect to programs such as JTPA, LMI operates on many levels: as a necessary *precondition* for identifying and defining an issue; as a *vehicle* for implementing congressional policy of targeting funds to a problem; as a part of the *service* delivered; and as a *monitoring device* for Congress to judge the success of legislation.

Unfortunately, Duggin contended, the LMI system is too often taken for granted, and too seldom well explained. In NMI's publication, "Labor Market Information: An Agenda for Congress," written by Duggin and David Stevens, it's suggested that LMI needs to be reviewed by Congress from time to time to determine if the data needed for assessing current problems are being collected.

Maxe Lowe, associate commissioner of higher education, Utah Department of Education, gave a postsecondary school system's view of LMI's success in assisting policy-making.

Lowe said that from his state's experience he recognizes LMI's potential value for targeting limited educational resources for training programs in high-demand occupations. That's because, he said, Utah's high birth rate has increased demand for training services at a time when re-

(Continued on page 3)

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Brent Fine, Editor
Linda Van Calcar, Word Processor

(Continued from page 2)

sources are dwindling for educational programs.

Utah's efforts to live within its budget have resulted in college program cuts. LMI, Lowe said, helped him ward off lawsuits by tenured faculty, because he was able to show that programs being cut were not related to high-demand occupations.

Lowe also discussed one situation he faced that might have been avoided if the availability of LMI data were more widely known. He said a group representing Utah's aerospace industry produced a study contending Utah would need 20,000 additional technical workers -- including 1,500 machinists -- in a few years. Since Utah's higher education institutions were ill-equipped to train more than 150 machinists a year, the industry's projected demand would put a strain on the state's training system.

But for the same period, *Utah Job Outlook*, the local LMI supply/demand report, was forecasting much lower growth of machinists. Investigation into the methods of each study supported LMI's projection.

In the end, Utah higher education was saved from implementing a crash program to accelerate the training of machinists. Had the aerospace group known of LMI's forecast before producing its own, the group might have saved itself some embarrassment, and Utah higher education some grief. Lowe's advice to producers of LMI: "Don't keep your light under a bushel."

What is Known, Unknown About Labor Markets

A panel consisting of university professors from the West and an economic consultant discussed the economic conditions of states in the Western Region. The panel, moderated by Sam Hirabayashi, BLS Western Region commissioner, made its assessments using unemployment statistics, population and employment growth forecasts, state employment rankings, and commercially produced business-failure statistics.

The presentations demonstrated how existing LMI data can aid economic analysis. Two panelists, however, pointed out deficiencies in the LMI information for making clear analyses.

Paul Sommers, research director for Northwest policy, University of Washington, said linkages between the service sector and goods-producing sector cannot be determined with LMI data. As a result, Sommers said Washington is unable to predict the total fallout from its shrinking lumber and wood products, and fishing industries.

Lee McPheters, director of the Arizona State University, Economic Outlook Center, said he finds it hard

(Continued on page 4)

(Continued from page 3)

to interpret business-failure statistics, because the same states with large amounts of business formation also have large numbers of business failures.

Stevens, a professor at the University of Missouri, and coauthor of "LMI: An Agenda for Congress," addressed what isn't known about labor markets.

One of LMI's principal weaknesses is in the lack of information about change, Stevens said. For example, Stevens asked, what is the significance of "decoupling," or the fact that one's location while working is increasingly unimportant? And what about technological innovations, such as personal computers and cellular telephones, which have let us work from our homes or even our cars, he said.

> *For the first time the labor department is involved in something with enough lead time to influence the outcome.*
>
> *--Tom Plewes,*
> *BLS Associate Commissioner*

Another problem with LMI is that there is always tension between today's urgent questions and the data available. In addition, there is "unevenness." We don't all deal with the same issues at the same time.

Stevens spoke of five aspects of labor market dynamics which would be valuable for policy makers that current LMI doesn't touch on or thoroughly explain.

(1) *Simultaneous growth and decline of employment by area, industry, or occupation.* When, how, and why people move from one occupation to another, from one labor market to another, or even from one industry to another.

(2) *Turnover.* Is the absence of turnover, for example, good or bad?

(3) *Relocation.* Wouldn't it be valuable to know the effect of two-earner families on the willingness of both earners to relocate for the advancement of one?

(4) *Technology.* What is the employment impact of each new advancement?

(5) *What substitutions of capital for labor, or even labor for labor, result from minimum wage legislation?* One major problem for LMI producers is one of functional ambiguity, Stevens said. LMI can be used for evaluation purposes, but because training program operators often do not want to be held accountable for their results, use of LMI to evaluate them is resisted.

Stevens also said that significantly more LMI might be obtained from employers today than, say, in the 1940s when many components of LMI were established.

There is a trade-off between intrusiveness and reciprocity, he contends, that may help LMI shops to gain access to more data. In other words, a survey once seen as intrusive, may now be acceptable, because employers may be willing to help the government in return for help the government might provide them. For instance, job training assistance might be welcomed when technology or foreign competition generates the need.

When pondering what new sensors LMI might set up, Stevens suggested LMI try to monitor the qualifications of those who move through a job. Despite the assumptions inherent in

(Continued on page 5)

(Continued from page 4)
a career-information delivery system (CIDS), people come from a variety of sources and backgrounds to fill the same job, Stevens argued.

LMI could better inform education and training providers if it performed research of this type, he said. Equally interesting, he said, would be information tracking changes in the requirements of a job, or how the job evolves.

A Federal Perspective on Improving LMI

Tom Plewes, associate commissioner of BLS, outlined the national direction LMI would be taking over the next several years.

Plewes started by citing the department's initiatives for the year 2000, and noted that for the first time the labor department is involved in something with enough lead time to influence the outcome. In stating what these initiatives mean for LMI programs, he contends Congress expects us to be labor market analysts, not historians.

Analysis of demographic and labor market trends, according to Plewes, suggests five scenarios for the nation's future:

(1) *A new compact between employer and employee.* The net effects will be: more flexible unions; employers using more leased labor; little or no premium pay for overtime, and the only way to increase personal income will be to work more hours; employers offering a cafeteria of benefits (employees may choose between day care for kids or health insurance, for example).

(2) *Labor shortages in low-paying, entry-level jobs (because of the shrinking youth cohort), and high-skill positions.*

OCCUPATIONAL
EMPLOYMENT
FORECASTS

(3) *Aging labor force.* The net effects will be: a more-productive, stable and less-mobile work force; fewer occupational shifts and less physical relocation; more delayed retirements because of opportunities from labor shortages.

(4) *Increasing numbers of women in the work force.* The net effects will be: employers offering day care services; less-mobile families because the career impact on both working partners will have to be considered when relocation with promotion is offered to one; a temporary, instead of long-term, absence when women leave the labor force to start families.

(5) *Skill imbalances among the work force.* Minorities will have greater opportunities than ever before, but a high proportion of them will not have acquired the necessary skills. This implies there will be a greater

(Continued on page 6)

(Continued from page 5)

burden on small employers -- who have the fewest resources available -- to provide training.

What all this means for LMI, Plewes said, is a need for greater use of the Current Population Survey (CPS), but less information for local areas. Redesign of the CPS, which is currently used in the 11 most-populated states to determine employment and unemployment figures, will emphasize minority groups and de-emphasize small geography.

At the same time, nationally the BLS will focus on administrative data bases, Plewes predicted. This implies the ES-202 (wage and salary data) program will become more available for general use, and will be used by program administrators for revenue enhancement. In addition, industrial coding should improve.

The BLS effort to create a site-specific Business Establishment List, Plewes said, portends survival of those LMI units using the most advanced means. It will be necessary, he believes, to use computer-assisted data collection, including voice-recognition devices.

Another major LMI component BLS will emphasize will be the Occupational Employment Statistics (OES) survey. Plewes said OES coding will be based on the Standard Occupational Classification (SOC) code, which will be developed after the Dictionary of Occupational Titles (DOT) is updated in 1992.

The OES survey will be more general in nature, he said. Besides the occupational data currently collected, the OES survey will include gender, race, and wage data, and it will probably remain on a three-year cycle.

The fourth major component of the BLS LMI program will be a national Unemployment Insurance (UI) wage record data base. The present Permanent Mass Layoff and Plant Closing report will be subsumed into this data base, Plewes believes, but the data base would offer other information opportunities, as well. (Tracking of training program completers by Social Security number, for instance.)

To deal with labor shortages, Plewes recommended revival of the Job Openings and Labor Turnover Survey. This was a monthly survey of employers to determine the number of job vacancies, quits, layoffs, and other accessions and separations. The survey was terminated during the 1970s when BLS sustained major budget cuts.

Following the BLS perspective on the future of LMI, state representatives gave their reactions to the plans. A report on those reactions will follow in a later issue of this newsletter.

--Ron Simon,
Economic Analysis Manager

Input Sought on LMI Proposals

Readers are invited to offer their reaction to the LMI conference. Write to: Brent Fine, editor, *Arizona LMI Newletter*, Site Code 733A, P.O. Box 6123, Pheonix, AZ 85005.

RA's Creation Gave More Visibility to Economic Analysis Programs

In an effort to give readers a better understanding of the functions of DES, Research Administration, starting in the April issue and continuing for the next several months the Arizona LMI Newsletter is taking an in-depth look at the data-gathering and analysis group that measures the state's economic pulse. Articles are focusing on the four units that make up Research Administration and the services they provide to the public and private sectors, plus looking at what the future holds for this five-year-old agency. This month, the Economic Analysis unit is discussed.

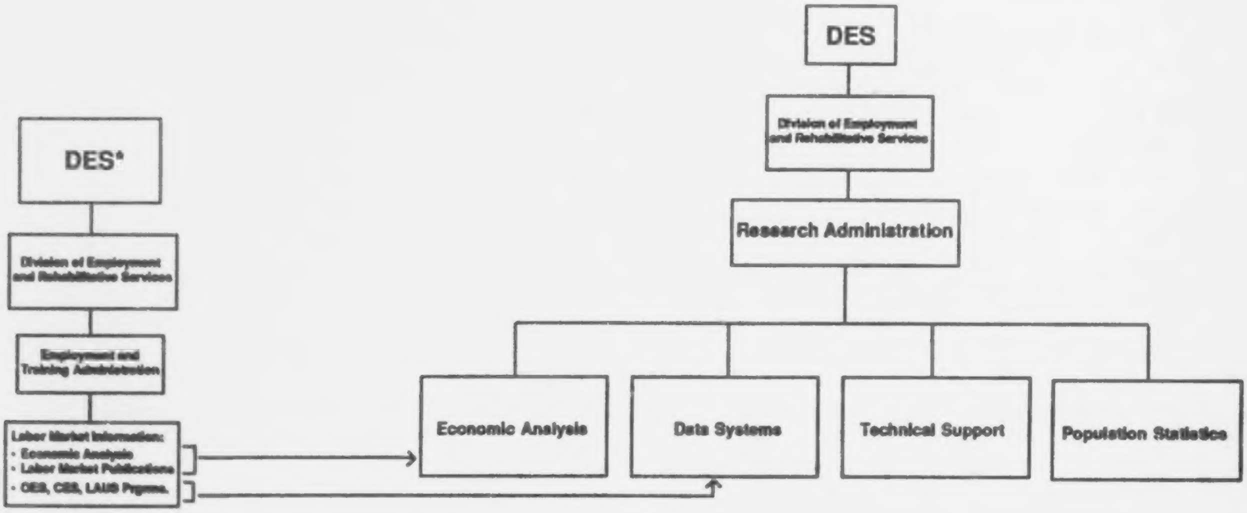
Second in a series

As pointed out in the April *Arizona LMI Newsletter*, some of the major reasons for creating Research Administration (RA) were to: reduce fragmentation in the collection and dissemination of economic information; develop a one-stop shopping center of data for the public, and private and government organizations; and bring together a staff with similar skills (data analysis, word processing), where it would be easier to allocate resources and develop cross-training programs.

A less-publicized reason for creating RA, but also important, was an effort to give more visibility to programs that now make up the Economic Analysis and Data Systems units of RA. With the creation of a separate administration these programs would receive a similar level of recognition on the state level that their federal counterparts and funding sources -- the U.S. Department of Labor's Bureau of Labor Statistics, and Employment and Training Administration -- receive on the national level.

Prior to RA's creation in April 1984, the majority of functions that now make up the Economic Analysis unit of RA were part of the Labor Market Information (LMI) unit of DES' Employment and Training Administration (ETA) (Figure 1). Also included in the LMI unit was the

(Continued on page 8)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Employment and Training Administration
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• Economic Analysis
• Labor Market Publications
• OES, CES, LAUS Prgms.
DES
Division of Employment and Rehabilitative Services
Research Administration
Economic Analysis
Data Systems
Technical Support
Population Statistics

*Prior to April 1984

Figure 1. Partial Evolution of Economic Analysis Unit

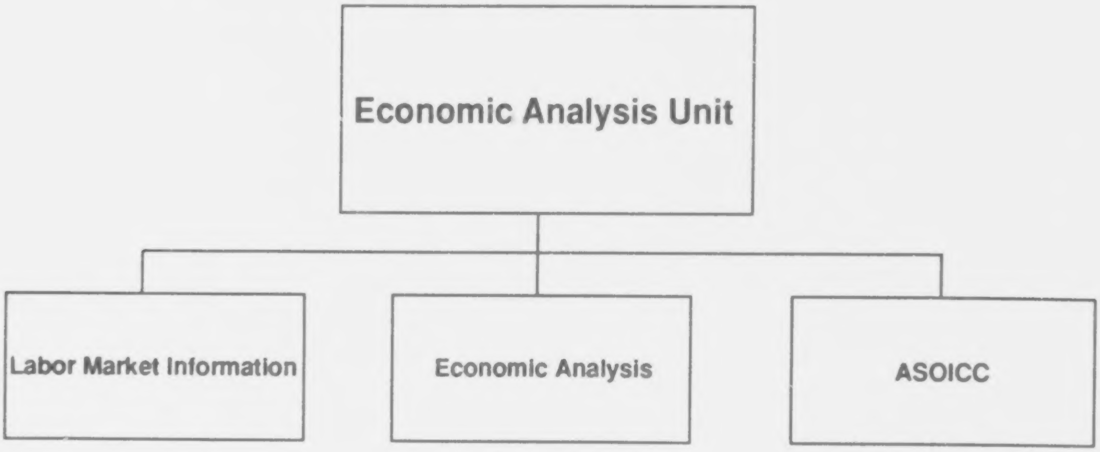

Figure 2. Research Administration, Economic Analysis Unit

(Continued from page 7)

Occupational Employment Statistics (OES) and Current Employment Statistics (CES) programs, which are now under the Data Systems unit, along with the ES-202 (employment and wages) research program, which was brought over from DES' Unemployment Insurance Administration.

As its name implies, the Economic Analysis unit's basic function is to analyze and make projections about the state's economy. Some may say that equates to looking at crystal balls or throwing darts at walls. In real terms, however, for the nine-member staff it translates into the compilation, analysis and dissemination (through publications, press releases, data bases) of labor market data.

Who uses the data? a wide range of interest groups, including current and future job seekers; large and small businesses; vocational education and employment and training programs; and local, state and federal agencies involved in program planning.

To more easily accomplish its primary goal, the Economic Analysis unit has been divided into three sections (Figure 2) -- Economic Analysis (EA), Labor Market Information (LMI), and the Arizona State Occupational Information Coordinating Committee (ASOICC). (In this article the Economic Analysis section will be abbreviated "EA"; the entire Economic Analysis unit will be spelled out.)

For the most part, each Economic Analysis section works independently, but they are also dependent on each other's data for producing their final results. For example, ASOICC uses data gathered by the LMI section to project vocational employment in its publication, *Year 2000 Employment Projections*, while LMI needs industry forecasts by EA to make employment projections in its occupational forecast publications.

And while many of the functions of the Economic Analysis unit have not changed in the past 15 years,

(Continued on page 14)

The Arizona Labor Force in March

The Arizona unemployment rate climbed to 6.0 percent in March despite an increase of 8,200 in total employment and a decrease of 2,300 in unemployment. Seasonal adjustment was responsible for the uptick, indicating March's employment gain and unemployment loss was less than expected.

Nonfarm wage-and-salary jobs increased 8,000, or 1,200 under the average-March gain since 1982. Over-the-year job growth from March to March was only 1.1 percent. (Arizona's January over-the-year growth was just under 1 percent, ranking Arizona 49th among states for wage-and-salary employment growth.)

Goods-producing industries of Manufacturing and Construction had some spring bounce, together adding 700 jobs, but their resilience was weak.

Construction's first monthly employment gain in six months was only 500, well below the 1,200 average-March gain during the economic expansion since 1982. Manufacturing's gain of 200 jobs was also well below the March average of 500 during the post-1982 expansion.

Despite the start of spring, the near-term outlook for Construction remains bleak. Although mortgage interest rates have not been rising as much as short-term loan rates, they have been rising enough to retard demand for new housing.

The construction-related industry of Finance, Insurance, and Real Estate (FIRE) posted a 100-job loss, reversing its direction after only one month of gain, following 11 months of continuous decline. Most of FIRE's losses, which are likely to continue as interest rates rise, were in finance and insurance.

Another construction-related industry on the losing side in March was Transportation, Communications, and Public Utilities (TCPU). A 600-job loss was primarily in public utilities in northern counties.

While goods-producing industries were suffering less-than-normal employment growth in March, some service industries were growing by better-than-average amounts.

Trade added 2,900 jobs, of which 2,400 was in retail trade. Most of the growth was in department stores, food stores, and "other retail trade," a catch-all category made up of sellers of building materials, hardware, garden supplies, furniture, appliances, radios and televisions, flowers, tobacco products, and miscellaneous other retail items. Much of this activity was associated with preparations for Easter promotions.

The Services and Miscellaneous category enjoyed good growth in March. Hotels and lodging places equaled its March 1984 growth, adding 1,400 jobs, mostly in Maricopa and northern counties. Although the Arizona skiing season was coming to an end in March, last-chance sportsmen boosted demand for lodging services.

Business services, a group that normally loses employment in March, picked up 500 jobs instead. The gain was nearly all in temporary help services in the two urban counties.

In summary, March showed the continued deterioration of Arizona's economy, particularly in the goods-producing sectors.

--Ron Simon,
Economic Analysis Manager

Arizona Labor Force and Employment

March 1989 (in thousands)

	Arizona				
				Amount Change	
	Mar.* 1989	Feb. 1989	Mar. 1988	Feb.- Mar.	1988- 1989
TOTAL CIVILIAN LABOR FORCE**	1693.0	1687.1	1613.1	+5.9	+79.9
Total Unemployment	97.8	100.1	93.9	-2.3	+3.9
Rate	5.8	5.9	5.8	----	----
Rate (Sea. Adj.)***	6.0	5.9	6.0	----	----
Total Employment	1595.2	1587.0	1519.2	+8.2	+76.0

The Above Labor Force Statistics Should Not

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Mar.* 1989	Feb. 1989	Mar. 1988	Feb.- Mar.	1988- 1989
TOTAL WAGE AND SALARY	1437.7	1429.7	1422.5	+8.0	+15.2
Manufacturing	189.9	189.7	188.5	+0.2	+1.4
Durable Goods	145.4	145.7	145.6	-0.3	-0.2
Stone, Clay, and Glass	7.5	7.5	7.7	+0.0	-0.2
Primary and Fabricated Metals	15.7	15.8	15.5	-0.1	+0.2
Primary Metals	7.6	7.6	7.4	+0.0	+0.2
Fabricated Metals	8.1	8.2	8.1	-0.1	+0.0
Machinery	65.2	65.4	66.3	-0.2	-1.1
Other Durable Goods	57.0	57.0	56.1	+0.0	+0.9
Aircraft and Missiles	26.2	26.2	26.5	+0.0	-0.3
Lumber and Wood Product (Excluding Furniture)	8.2	8.3	7.7	-0.1	+0.5
All Other Durable Goods	22.6	22.5	21.9	+0.1	+0.7
Nondurable Goods	44.5	44.0	42.9	+0.5	+1.6
Food and Kindred Products	9.3	9.2	9.0	+0.1	+0.3
Apparel	4.7	4.7	4.7	+0.0	+0.0
Printing and Publishing	17.0	16.9	16.7	+0.1	+0.3
All Other Nondurable Goods	13.5	13.2	12.5	+0.3	+1.0
Mining and Quarrying	12.0	12.1	11.8	-0.1	+0.2
Copper Mining	9.0	9.0	8.7	+0.0	+0.3
Other Mining and Quarrying	3.0	3.1	3.1	-0.1	-0.1
Construction	89.2	88.7	93.4	+0.5	-4.2
Trans., Communications, & Public Utilities	72.3	72.9	73.6	-0.6	-1.3
Transportation	36.3	36.1	36.6	+0.2	-0.3
Communications and Public Utilities	36.0	36.8	37.0	-0.8	-1.0
Trade	358.0	355.1	347.5	+2.9	+10.5
Wholesale Trade	69.4	68.9	68.4	+0.5	+1.0
Retail Trade	288.6	286.2	279.1	+2.4	+9.5
General Merchandise and Apparel	44.2	43.8	42.4	+0.4	+1.8
Food Stores	48.3	47.9	46.1	+0.4	+2.2
Automotive and Service Stations	35.0	34.9	33.5	+0.1	+1.5
Eating and Drinking Places	101.6	100.7	99.1	+0.9	+2.5
Other Retail Trade	59.5	58.9	58.0	+0.6	+1.5
Finance, Insurance, and Real Estate	91.4	91.5	94.8	-0.1	-3.4
Services and Miscellaneous	370.3	366.9	365.3	+3.4	+5.0
Hotels and Other Lodging Places	43.1	41.7	41.5	+1.4	+1.6
Business Services	77.6	77.1	78.9	+0.5	-1.3
Health Services	92.3	92.3	90.9	+0.0	+1.4
Other Services	157.3	155.8	154.0	+1.5	+3.3
Government	254.6	252.8	247.6	+1.8	+7.0
Federal	43.4	43.3	43.0	+0.1	+0.4
State and Local	211.2	209.5	204.6	+1.7	+6.6
School	121.2	120.0	120.0	+1.2	+1.2

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

March 1989 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
Mar.* 1989	Feb. 1989	Mar. 1988	Feb.- Mar.	1988- 1989	Mar.* 1989	Feb. 1989	Mar. 1988	Feb.- Mar.	1988- 1989
1047.7	1043.2	1001.6	+4.5	+46.1	320.4	319.4	304.5	+1.0	+15.9
50.5	50.8	48.9	-0.3	+1.6	15.8	16.3	14.9	-0.5	+0.9
4.8	4.9	4.9	---	---	4.9	5.1	4.9	---	---
4.8	4.8	4.9	---	---	4.9	5.0	4.9	---	---
997.2	992.4	952.7	+4.8	+44.5	304.6	303.1	289.6	+1.5	+15.0

e Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

945.1	940.3	938.2	+4.8	+6.9	252.7	251.4	250.1	+1.3	+2.6
138.9	138.6	137.2	+0.3	+1.7	29.6	29.8	30.8	-0.2	-1.2
107.9	107.9	106.9	+0.0	+1.0	23.7	23.9	25.1	-0.2	-1.4
4.9	4.9	4.9	+0.0	+0.0					
10.5	10.5	10.3	+0.0	+0.2					
52.5	52.6	52.9	-0.1	-0.4					
40.0	39.9	38.8	+0.1	+1.2					
31.0	30.7	30.3	+0.3	+0.7	5.9	5.9	5.7	+0.0	+0.2
6.0	6.0	5.9	+0.0	+0.1					
3.4	3.5	3.5	-0.1	-0.1					
12.0	11.9	12.0	+0.1	+0.0					
9.6	9.3	8.9	+0.3	+0.7					
0.7	0.8	0.7	-0.1	+0.0	2.0	2.0	1.7	+0.0	+0.3
61.0	60.8	64.1	+0.2	-3.1	16.0	16.0	17.2	+0.0	-1.2
50.3	50.3	50.3	+0.0	+0.0	9.0	9.0	9.2	+0.0	-0.2
26.9	26.8	26.5	+0.1	+0.4	4.5	4.5	4.8	+0.0	-0.3
23.4	23.5	23.8	-0.1	-0.4	4.5	4.5	4.4	+0.0	+0.1
242.3	240.6	235.6	+1.7	+6.7	58.2	57.8	56.8	+0.4	+1.4
55.2	55.0	54.2	+0.2	+1.0	7.1	6.9	7.0	+0.2	+0.1
187.1	185.6	181.4	+1.5	+5.7	51.1	50.9	49.8	+0.2	+1.3
28.2	27.9	27.7	+0.3	+0.5	7.3	7.4	7.3	-0.1	+0.0
31.5	31.4	29.6	+0.1	+1.9	8.1	8.0	8.0	+0.1	+0.1
22.3	22.1	21.1	+0.2	+1.2	5.4	5.5	5.4	-0.1	+0.0
65.2	64.7	63.7	+0.5	+1.5	18.9	18.7	18.4	+0.2	+0.5
39.9	39.5	39.3	+0.4	+0.6	11.4	11.3	10.7	+0.1	+0.7
72.8	72.8	75.5	+0.0	-2.7	11.7	11.8	12.3	-0.1	-0.6
249.4	247.2	247.2	+2.2	+2.2	70.2	69.7	68.6	+0.5	+1.6
26.4	25.4	24.8	+1.0	+1.6	7.1	7.0	7.2	+0.1	-0.1
60.5	60.2	62.7	+0.3	-2.2	11.8	11.7	11.4	+0.1	+0.4
60.0	60.1	59.6	-0.1	+0.4	20.0	19.9	19.3	+0.1	+0.7
102.5	101.5	100.1	+1.0	+2.4	31.3	31.1	30.7	+0.2	+0.6
129.7	129.2	127.6	+0.5	+2.1	56.0	55.3	53.5	+0.7	+2.5

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Mar.* 1989	Feb. 1989	Mar.* 1988	Mar.* 1989	Feb. 1989	Mar. 1988	Mar.* 1989	Feb. 1989	Mar. 1988
Manufacturing	399.67	404.67	402.37	40.7	41.0	41.1	9.82	9.87	9.79
Aircraft & Missiles	601.04	603.46	INA	44.0	44.0	INA	13.66	13.47	INA
Food & Kindred Prod.	345.06	336.88	353.23	40.5	40.2	39.6	8.52	8.38	8.92
Primary Metals	516.78	504.27	472.20	39.6	39.0	38.8	13.05	12.93	12.17
Machinery	386.89	401.17	401.44	39.6	40.4	41.6	9.77	9.93	9.65
Copper Mining	554.17	529.57	525.34	42.4	41.6	42.4	13.07	12.73	12.39
Construction	422.10	419.22	432.89	35.5	35.8	36.5	11.89	11.71	11.86
Utilities	663.41	692.41	632.10	40.8	42.9	42.0	16.26	16.14	15.05
Retail Trade**	246.89	246.24	246.75	32.7	32.4	32.9	7.55	7.60	7.50
Wholesale Trade	365.00	369.33	390.66	38.1	39.0	39.5	9.58	9.47	9.89

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Mar.* 1989	Feb. 1989	Mar. 1988	Mar.* 1989	Feb. 1989	Mar. 1988	Mar.* 1989	Feb. 1989	Mar. 1988
Manufacturing	428.22	435.97	428.69	40.9	41.6	41.3	10.47	10.48	10.38
Construction	442.26	440.03	453.36	36.4	36.7	37.1	12.15	11.99	12.22
Retail Trade**	266.01	268.93	269.01	33.6	33.7	33.5	7.87	7.98	8.03
Wholesale Trade	382.00	388.09	400.18	38.2	39.4	39.7	10.00	9.85	10.08

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Mar.* 1989	Feb. 1989	Mar. 1988	Mar.* 1989	Feb. 1989	Mar. 1988	Mar.* 1989	Feb. 1989	Mar. 1988
Manufacturing	370.33	369.79	368.26	38.4	38.6	38.9	9.59	9.58	9.52
Copper Mining	549.54	585.50	590.98	43.2	42.8	43.0	13.68	13.68	12.78
Construction	379.14	389.61	393.39	36.8	37.0	35.6	10.69	10.53	10.65
Utilities	574.56	580.27	586.45	42.1	41.3	42.0	13.93	14.05	13.68

* Preliminary
** Excludes eating and drinking places.

NOTE: These estimates are based on a sample of full-time and part-time production and related employees whose payroll and hours are reported for the pay period that includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
March 1989

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	15,550	35,025	42,350	12,725	8,425	2,950	5,650
Total Unemployment	2,450	2,650	3,125	1,450	750	250	550
Rate	15.8%	7.6%	7.4%	11.4%	8.9%	8.5%	9.7%
Rate (Seas. Adj.)**	16.6%	7.1%	7.6%	10.3%	8.8%	8.8%	9.9%
Total Employment	13,100	32,375	39,225	11,275	7,675	2,700	5,100

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	15,125	25,400	38,375	10,700	5,350	2,850	3,800
Manufacturing	800	1,275	2,825	1,350	200	50	350
Mining & Quarrying	50	125	175	1,275	0	1,550	100
Construction	875	850	1,600	600	225	200	200
T.C.P.U.	1,950	1,625	2,525	375	150	50	50
Trade	1,475	5,750	8,775	2,150	1,475	225	1,275
F.I.R.E.	325	725	950	275	100	25	100
Services & Misc.	4,250	4,825	9,650	2,050	900	150	925
Government	5,400	10,225	11,875	2,625	2,300	600	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	32,925	27,075	39,450	10,650	37,425	54,725
Total Unemployment	2,100	3,475	3,150	1,125	2,400	8,050
Rate	6.4%	12.8%	8.0%	10.6%	6.4%	14.7%
Rate (Seas. Adj.)**	6.1%	12.7%	7.9%	15.7%	5.7%	21.4%
Total Employment	30,825	23,600	36,300	9,525	35,025	46,675

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	22,900	19,975	31,450	10,075	25,375	28,850
Manufacturing	2,825	1,850	4,200	1,300	2,225	2,200
Mining & Quarrying	200	1,175	3,625	0	950	50
Construction	1,750	875	1,450	350	1,875	1,375
T.C.P.U.	1,125	1,675	925	575	900	1,075
Trade	6,875	3,900	5,575	4,225	6,875	8,950
F.I.R.E.	1,000	375	800	275	975	1,050
Services & Misc.	5,250	4,675	4,350	1,625	5,800	6,300
Government	3,875	5,450	10,525	1,725	5,775	7,850

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
March 1989

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,692,997	1,595,159	97,838	5.8%
Apache	15,565	13,107	2,458	15.8
Cochise	35,024	32,373	2,651	7.6
Coconino	42,372	39,235	3,137	7.4
Gila	12,714	11,276	1,438	11.3
Graham	8,419	7,666	753	8.9
Greenlee	2,957	2,706	251	8.5
La Paz	5,645	5,106	539	9.5
Maricopa	1,047,705	997,160	50,545	4.8
Mohave	32,929	30,829	2,100	6.4
Navajo	27,084	23,610	3,474	12.8
Pima	320,342	304,561	15,781	4.9
Pinal	39,432	36,289	3,143	8.0
Santa Cruz	10,670	9,537	1,133	10.6
Yavapai	37,423	35,033	2,390	6.4
Yuma	54,715	46,671	8,044	14.7

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

RA Gave Economic Analysis Programs More Visibility

(Continued from page 8)

-- during several organizational changes -- there have been improvements along the way, says Economic Analysis Manager Ron Simon, who administers and makes major contributions to all sections. Until the mid-1970s there were no economists; now there are three. Rotary calculators were commonplace a decade ago, and all data had to be entered manually into office record cards, then later into a mainframe computer; now a highly technical forcasting model, available on microcomputer software, is used to project the state's employment and economic growth.

With the "move into the 21st century," Simon says jokingly, "We can see the future perfectly." Most Arizonans would probably be happy with the next year, thank you.

The EA section consists of two economists -- EA Supervisor Jalal Ahmad and Marc Marra -- and receives extensive assistance from Simon. Among its tasks are: re-evaluating and adjusting the Arizona Economic Forecasting Model (see below), developing economic and employment forecasts twice a year, holding monthly press conferences and issuing press releases on the state's employment data, evaluating the performance in Arizona of the Job Training Partnership Act (JTPA) program, working with Research Administration's Population Statistics unit to ensure its projections are in line with employment forecasts, and giving input to legislative committees and commissions to help them

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plan budgets for state and local agencies.

One major product of this section's labor is the annual employment and economic forecast and forecast update for the state as a whole, the two largest counties (Pima and Maricopa) and nonmetropolitan areas. The forecast and update, which are published in the March and September issues of the *Arizona LMI Newsletter*, include in-depth analysis of industries within the state and substate areas, along with a variety of related tables and charts.

Most of the forecasts are derived from the Arizona Economic Forecasting Model (AEFM), which measures various factors of the state's economy -- population growth, employment, unemployment, national economy -- to arrive at projections for the state's future economic growth. To properly track the state's economic health, the 250 equations that make up the AEFM are closely monitored and adjusted during the year.

The LMI section of Economic Analysis has three research analysts -- LMI Supervisor Barbara Keene, Glede Kohler, and Marcy Tomko.

LMI's primary function, says Keene, can be described in fairly simple terms. "We use data other units produce, add to it some of our own, analyze the data and disseminate it through various means -- publications, public appearances, telephone."

Some of the tasks that fall under this category are: conducting and publishing of annual wage surveys of small businesses (under 100 employees); supplementing large-employer surveys conducted by the Arizona Department of Administration; certifying that aliens offered jobs in Arizona are paid at least the prevailing wage in the area they're located; projecting occupational employment, and publication of occupational employment forecasts for each county and the state as a whole; and compiling planning information for the JTPA program, including publication of the *Annual Planning Information* guide, a compendium of economic data that is used by JTPA and other employment and training programs.

ASOICC ... is responsible for bringing together and coordinating Arizona's occupational information for vocational education programs and manpower services.

By far, LMI's major work involves producing new and revising old publications; particularly the *Annual Planning Information* guide, which takes about six months to prepare. All told, LMI is responsible for about 50 publications, and may be working on new and revising as many as 20 publications at one time.

The final section of the Economic Analysis unit is ASOICC, which is responsible for bringing together and coordinating Arizona's occupational information for vocational education programs and manpower services, as well as developing occupational demand and supply data on vocational education.

Created by the Arizona Legislature in 1978, ASOICC is a state branch of the National Occupational Information Coordinating Committee (NOICC), which was established as part of vocational education laws passed by the U.S. Congress in the mid-1970s.

Since its inception, ASOICC has been tied to three state agencies -- DES, the Department of Education, and the Department of Commerce (formerly the Office of Economic Planning and De-

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velopment) -- as part of an interagency agreement. But when Research Administration was created in 1984, ASOICC moved from its offices at the Department of Education to DES, primarily because it gives ASOICC easier access to labor market data it uses to produce publications and operate a data base.

ASOICC has a two-person staff, consisting of Executive Director Stan Butterworth, and the manager of its data base operation (MICRO OIS), Hugo Soll.

Butterworth, who has headed ASOICC since 1980, has several major responsibilities, including: administering and marketing of the ASOICC program; setting up career workshops for high schools and community colleges, job fairs, and community-based groups; writing and putting together occupational briefs and other publications; and coordinating programs within the three state agencies it serves. In addition to running the data base, Soll also produces numerous reports available to the public relating to the data base and DES Job Service activity.

> *"There is a great deal of data that have gone unanalyzed. There is potential for more analysis if there were more staff."*
>
> *--Ron Simon,*
> *Economic Analysis Manager*

One of ASOICC's major accomplishments, Butterworth says, has been the development of the MICRO OIS, a micro-computer data base that offers a wide variety of occupational information to vocational planners, job placement specialists, career counselors, personnel managers and students. Developed by Soll in 1986, the MICRO OIS is in its second version and has been installed in more than 50 locations throughout the state. (For more information on the MICRO OIS, read, *The 1988 MICRO OIS of Arizona - for Vocational Planning, Counseling, and Evaluation*, or contact Soll or Butterworth.)

Working with all three sections and in coordination with Simon is the recently created position of administrative assistant. Filled by Brent Fine, the position is primarily responsible for editing and layout of Economic Analysis publications and operation of RA's desktop publishing system.

"The idea is to give a more professional look to our publications" and free up time for the LMI section to work on other projects, says Simon, adding that it's the first position added to RA in three years.

Simon, who has worked 15 years with the state's labor market data programs -- including eight as supervisor of part of the LMI unit when it was under ETA -- believes the creation of RA has been a positive move because it's "easier to share data" among programs. In addition, the Economic Analysis manager says there's been a better association with groups involved with vocational education and the Arizona Department of Education with the move of ASOICC to DES.

As for the future, Simon believes Economic Analysis has the potential to offer more information to the public, provided there is adequate funding, which currently comes only from the federal government. "There is a great deal of data that have gone unanalyzed. There is potential for more analysis if there were more staff," Simon says.

In the June issue, RA's Technical Support unit will be discussed.

--Brent Fine,
Arizona LMI Newsletter editor

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported from these sources.

MANUFACTURING - Several hundred jobs are expected to be created when **Motorola Inc.** opens a $200 million semiconductor plant in Chandler. Construction of the plant, which will build sophisticated integrated circuits, has not been set. The plant will support Motorola's wafer fabrication facility in Mesa, which employs 600.

McDonnell Douglas Helicopter Co. in late April eliminated 355 jobs at its Mesa plant due to the winding down of production of Apache attack helicopters, the company said. Ninety-five jobs at its Culver City, Calif., operation were also terminated. The reductions, which are expected to save McDonnell Douglas $16 million, are 5.7 percent of the helicopter company's work force.

Intel Corp. is expected to lay off 200 employees from its wafer-fabrication plant in Chandler starting in June. The cuts are part of companywide reductions at Intel's five U.S. plants. Intel currently employs 2,700 at its Chandler operation.

W.A. Krueger Co. is moving its corporate headquarters from Scottsdale to Itasca, Ill., a suburb of Chicago. The move, which will consolidate the company's two administrative offices, will affect some management and clerical positions in the Phoenix area. The move will have no bearing on Krueger's printing plant at 2802 W. Palm Lane in Phoenix, where *Arizona Highways* is produced. Some of Krueger's 70 employees in the Phoenix area are being offered severance packages. Krueger is being taken over by Ringier AG of Zurich, Switzerland, in June or July.

Moving into a new office and warehouse complex at 1555 W. 10th Place in Tempe will enable **Blue Chip International Inc.** to double its space and expand its manufacturing operation. Blue Chip will now be able to handle final assembly work on its personal computer products. Currently, all of its manufacturing is done in South Korea. The increased work load will mean the hiring of an additional 25 workers by the end of the year.

Arvin Industries Inc. of Columbus, Ohio, plans to sell its Phoenix-based **ArvinAir Division,** which builds portable electric heaters, and evaporative coolers. ArvinAir employs 1,100 people, who work in engineering, marketing and production.

Gentron Corp. has moved its corporate headquarters from Glendale, Wis., to Scottsdale. Gentron, which manufactures electronic parts for the military -- film-power circuits, motor speed controls --, plans to also expand its work force from 20 to 100.

CONSTRUCTION - The **Phoenix City Council** has given the OK to a $70 million project to build a **downtown arena and parking garage.** The 18,000-seat arena will be used primarily by the **Phoenix Suns** professional basketball team, but will be available for other events. The city and Suns are splitting the cost of building the arena, which will be located on the southwestern corner of Third and Jefferson streets.

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Construction has begun on the first of twin, 24-story office towers for the **Greyhound Corporate Center** at Central Avenue and Palm Lane in Phoenix. Greyhound Corp. will occupy two-thirds of the first building -- Greyhound Tower -- scheduled to open in two years. A 200-seat performing arts center, located between the two buildings, is also planned.

Work is under way on the second office tower of the **Arizona Center**, a $515 million mixed-use project on 18.5 acres in downtown Phoenix. **Pinnacle West**, holding company for MeraBank, Arizona Public Service Co. (APS) and other subsidiaries, will occupy one-third of the 20-story, 322,000-square-foot building, located at 400 E. Van Buren St. **APS** occupies 17 of 20 floors in the first office building, Two Arizona Center, which opened March 1. It's located at 400 N. Fifth St. The Arizona Center, which is scheduled to be built over the next 13 years, will also feature a 100-store retail center.

TRADE - Concord, Calif.-based **Office Club** has opened the first of at least five office-supply stores planned for Arizona. The 22,000-square-foot store, which offers discounted office products, is in a converted warehouse at 220 S. Ninth St. in Phoenix. Three other Valley locations and one in Tucson are planned for later this year or early 1990.

FINANCE, INSURANCE and REAL ESTATE - **American Continental Corp.**, which owns two resorts in the Valley (including the lavish Phoenician) and is involved in other development projects, filed for reorganization under federal bankruptcy laws in mid-April. One of the largest real estate and financial services companies in the Valley, American Continental said it was forced to take this action because the Federal Home Loan Bank Board was about to take over (and later did) Lincoln Savings of Irvine, Calif., which American Continental owns and was trying to sell. Federal regulators claim American Continental was severely risking the health of Lincoln, by tapping its $5.4 billion in assets for risk-oriented investments. American Continental, which has lost $35 million since Sept. 30, claims it is being unfairly harassed and would not be able to continue its projects without the sale of Lincoln. American Continental employs about 3,000 people -- down about 10 percent from January -- at its resorts, company offices in Phoenix, and subsidiaries.

The state's second largest thrift, **Western Savings and Loan Association** reported a $100 million first-quarter loss, which comes on the heels of a $201 million loss in 1988. The loss, blamed on a poor Valley real estate market, dropped Western's capital below federal guidelines. It's unlikely the financial institution will be able to avoid insolvency without new capital, Western's chairman, Robert W. Stallings, said.

Arizona Bank and its 99 branches have been renamed Security Pacific Bank Arizona by its parent company, Security Pacific Corp. of Los Angeles. Security Pacific, which has owned Arizona Bank since October 1986, has not indicated there will be any employment changes.

TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES - **Salt River Project** (SRP), the state's second-largest utility, is eliminating nearly 800 full-time positions -- 13.5 percent of its staff -- 500 of which will be cut by Sept. 1. The $50 million cost-cutting move means the elimination of 340 hourly and 295 salaried and non-supervisory

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jobs, plus 156 management positions. About two-fifths of the cuts, however, will be eliminated by not filling vacant positions and through voluntary severance. Overstaffing was given as the primary reason for the layoffs. One area particularly hard hit by the SRP layoffs is **St. Johns**, a town of about 4,000, 45 miles northeast of Show Low near the New Mexico border. Between 65 and 70 positions at the Coronado Generating Station in St. Johns are being eliminated.

Three airlines announced plans to expand or open reservation centers in the Valley. Seattle-based **Alaska Airlines** is moving its Long Beach, Calif., reservation center to Phoenix. Many of the 100 employees in Long Beach may move with the company to a reported 70,000-square-foot facility in Phoenix, but it's likely there will be hiring locally with plans for future expansion. Meanwhile, Valley-based **America West Airlines** is adding 120 part-time employees to its 580-employee reservation center in Tempe. And **Southwest Airlines** expects to add 50 to 60 more employees to its Phoenix reservation center that already employs 305.

SERVICES AND MISCELLANEOUS - **Ramada Inc.** of Phoenix is selling its 825 worldwide hotels to **New World Development Co. Ltd.**, which has agreed to then transfer control to most of the properties to **Prime Motor Inns Inc.** of Fairfield, N.J. Ramada officials have not said what will happen to its headquarters and reservations center in Phoenix, which employs 675 people.

Sears, Roebuck and Co. plans to open a telephone catalog-sales center in Tucson in July. The center, which will use 40,000-50,000 square feet in the Butterfield Technical Center, is expected to employ between 800 and 1,100 people. The jobs are expected to pay between $5 and $7 per hour, with "handsome fringe benefits." Sears' move follows on the heals of an announcement by **First Data Resources** of Omaha, Neb., which will open a telephone-based data processing company in Tucson this summer that will employ 850 people. (See April 1989 *Arizona LMI Newsletter*.)

CPS Direct Marketing, a subsidiary of Carson Pirie Scott & Co., a retail and speciality store chain, is up for sale. CPS, which employs about 700 people in Phoenix that are involved in catalog and direct mail sales, lost $15 million in 1988. A company official declined to say what will happen to CPS or its employees.

Scottsdale-based **PCS Inc.**, which processes prescription-drug claims for insurance companies, might be adding 400 to 500 positions next year. The additional jobs will depend on whether PCS lands a federal contract to administer prescription-drug benefits for Medicare enrollees, which would take effect in January 1991. In the interim, PCS will hire 40 to 50 people to prepare its bid and create an operating network.

Mattel Toys is moving its data center for worldwide operations from Los Angeles to Cave Creek. Mattel has purchased a 16,000-square-foot building in the Cave Creek Industrial Center. The data center will employ 30 people.

DHL Worldwide Express is studying the possibility of moving its customer service operation from Redwood City, Calif., to Tempe. The move, although not official, could take place by mid-July and lead to employment of 375 people, with an additional 125 workers being hired within the following 12 to 18 months.

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XIII No. 6
June 1989

Unemployment Rate

Seasonally Adjusted
April*

ARIZONA -	5.8%
Maricopa County -	4.8%
Pima County -	4.9%
UNITED STATES -	5.3%

Consumer Price Index

U.S. - April 1989
Base = 1982-84

Wage Earner/Clerical Worker	- 121.8
% Chg. Year Ago	- 5.3
All Urban	- 123.1
% Chg. Year Ago	- 5.1

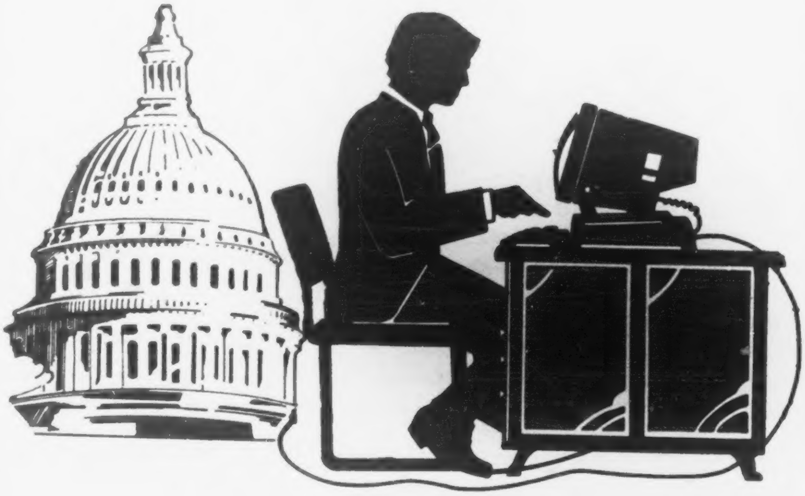
Phoenix - 1st Qtr 1988
Base = 1982-84

All Urban	- 123.7
% Chg. Year Ago	- 5.4

Tucson - 1st Qtr 1989
Base = 1982-84

All Urban	- 125.2
% Chg. Year Ago	- 3.6

* Preliminary



Tapping into the Federal Marketplace, P.2

Inside This Issue

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Arizona Network Gives Small Firms Helping Hand

Provides Data Base, Technical Assistance to Court Uncle Sam's Business

Since the U.S. government is one of the world's largest purchasers of goods and services, it makes sense that companies would court its business. Many small and minority-owned businesses, however, are not aware of the opportunities available or procedures required to obtain contracts with the federal government.

According to a study by the Northeast-Midwest Congressional Coalition, a legislative subcommittee that studied the impact of federal procurement dollars on local communities, for every million dollars in federal purchases, 35 jobs are created or retained. Federal agencies located in Arizona spent $2.1 billion on procurement contracts in 1986. More than half of that amount ($1.24 billion) went to out-of-state companies.

> *APTAN is a business retention and expansion tool providing direct technical and marketing assistance to small and minority-owned businesses interested in contracting with federal, state, and local governments ...*

One tool available to help companies compete for government contracts is a Government Procurement Outreach Center (GPOC). Its purpose "is to provide detailed information and personal instruction to companies, thereby increasing their chances of successfully selling their product or service to government agencies and to government prime contractors in the private sector."[1]

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SITE CODE 733A
P.O. BOX 6123
PHOENIX, ARIZONA 85005-6123
(602) 542-3871

Brent Fine, Editor
Linda Van Calcar, Word Processor

The Department of Defense, through the Defense Logistics Agency, is sharing the cost of supporting procurement-assistance programs operated by state and local governments and private nonprofit organizations, and encouraging the establishment of new programs.

Each program provides services tailored to the needs of the local area. Some of the more common services offered are:

- matching products or services with appropriate government agencies.
- assisting in the completion of required government forms.
- locating and providing specifications and standards necessary to complete bid packages.
- marketing companies to prime contractors for potential subcontracts.
- identifying sources of financial assistance.

The lone GPOC program in this state is the Arizona Procurement Technical Assistance Network (APTAN), which was established in November 1986 as a network of business-, technical-, and marketing-assistance centers designed to accomplish two distinct economic-development objectives.

Primarily, APTAN is a business retention and expansion tool providing direct technical and marketing assistance to small and minority-

(Continued on page 3)

Pima County Center
Tucson Economic Development Corp.
465 West St. Mary's Road, Suite 200
Tucson, AZ 85701-8268
(602) 623-3709

Maricopa County Center
Phoenix Chamber of Commerce
34 West Monroe St., Suite 900
Phoenix, AZ 85003
(602) 254-5521

Cochise County Center
Sierra Vista Economic Development Foundation
500 East Fry Blvd., Suite M6
P.O. Box 2380
Sierra Vista, AZ 85635
(602) 459-6071
Douglas: (602) 364-4451

City of Flagstaff
101 West Santa Fe
Flagstaff, AZ 86001
(602) 774-4505

Yavapai County Center
Prescott Area Economic Development Corp.
1500 E. Highway 69
P.O. Box 671
Prescott, AZ 86302
(602) 445-2290
Cottonwood: (602) 634-2246

Yuma County Center
Yuma Economic Development Corp.
377 Main St., Suite 202
P.O. Box 1750
Yuma, AZ 85364
(602) 783-0193

Figure 1. Arizona Procurement Technical Assistance Network (APTAN) Offices

(Continued from page 2)

owned businesses interested in contracting with federal, state, and local governments and their major prime contractors. In addition, the network helps recruit new businesses to the state by compiling information on manufacturing, construction, and service-producing businesses in the state.

APTAN, headquartered at the Tucson Economic Development Corp., is sponsored by the Department of Defense ($150,000 grant in September 1988), Arizona Public Service Co., US West Communications, The Knight Foundation, Job Training Partnership Act, and cities and counties in Arizona. In addition to the Tucson office, other state Procurement Technical Assistance Centers are operational in Cochise, Coconino, Maricopa, Yavapai, and Yuma counties (Figure 1).

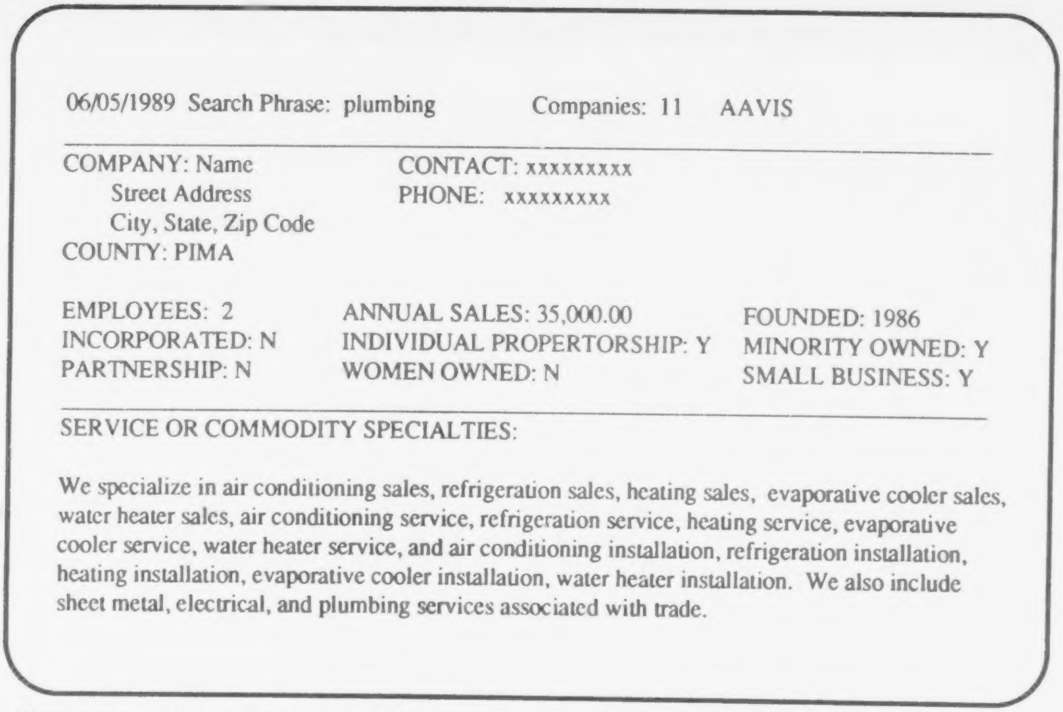
The Arizona program is administered by a central statewide program manager, Mick Walker. But to insure technical uniformity and reduce operating costs, responsibility for the scope and direction of each center is placed within individual local offices.

A major feature of APTAN is the Arizona Automated Vendor Inquiry System (AAVIS), a data base of manufacturing, manufacturing-support, construction and service-related businesses in the state. Started in December, AAVIS is a medium of advertising for business' goods or services, as well as a service for commercial and government contractors seeking vendors. There is no cost for users of the system.

Procurement specialists at each center are continually compiling profiles of businesses, and entering that information into AAVIS. By the end of 1989, an estimated 25,000 profiles are expected to be included in AAVIS, says Walker, who adds, "It (AAVIS) is the only data base of its kind in the country."

Companies wanting to be included in AAVIS can do so by completing a questionnaire. Each profile includes a company name, address, phone number, and product and service capability information, including quality assurance programs, business size, major customers, and other useful information.

(Continued on page 4)



06/05/1989 Search Phrase: plumbing Companies: 11 AAVIS

COMPANY: Name
Street Address
City, State, Zip Code
COUNTY: PIMA

CONTACT: xxxxxxxxx
PHONE: xxxxxxxxx

EMPLOYEES: 2	ANNUAL SALES: 35,000.00	FOUNDED: 1986
INCORPORATED: N	INDIVIDUAL PROPERTORSHIP: Y	MINORITY OWNED: Y
PARTNERSHIP: N	WOMEN OWNED: N	SMALL BUSINESS: Y

SERVICE OR COMMODITY SPECIALTIES:

We specialize in air conditioning sales, refrigeration sales, heating sales, evaporative cooler sales, water heater sales, air conditioning service, refrigeration service, heating service, evaporative cooler service, water heater service, and air conditioning installation, refrigeration installation, heating installation, evaporative cooler installation, water heater installation. We also include sheet metal, electrical, and plumbing services associated with trade.

Figure 2. Example of Response on AAVIS Network if Searching for Small Plumbing Businesses in the Tucson Metropolitan Area.

(Continued from page 3)

AAVIS is accessible by computer through a modem-linked telephone line to any contracting officer or site-selection executive in the United States. The user-friendly program allows an interested buyer to enter information about products or services needed, then the program scans the data base and presents profiles on the businesses capable of fulfilling those needs. (Businesses or federal agencies can also contact directly the nearest technical assistance center and receive help from a staff member.)

Another program available through AAVIS helps businesses locate potential contracts. The program, called Protech/Bidmate, matches local businesses with state and federal contracting opportunities nationwide. As the computer makes matches, businesses are informed of upcoming contracts. Bidding packets are ordered, and the companies are assisted throughout the procurement process.

In addition to the two programs mentioned, AAVIS will eventually include a data base with profiles on a large number of Arizona cities. Each profile will have information on cities' demographics, tax structure, transportation, and wages. Also, AAVIS could be a valuable resource for job counselors or individuals wanting background information on potential employers.

Besides AAVIS, APTAN has a library of military specifications and federal regulations that will be provided in printed form to companies on a 24-hour emergency and 72-hour, regular-need basis.

--Barbara Keene,
Labor Market Information Supervisor

[1] Sandra Stenzel, "A Government Procurement Outreach Center as an Existing Business Development Tool," Economic Development Review, Winter 1988, p. 33.

Technical Support Unit Provides Computer Expertise, Assorted Research for RA

In an effort to give readers a better understanding of the functions of DES, Research Administration, starting in the April issue and continuing for the next several months the Arizona LMI Newsletter is taking an in-depth look at the data-gathering and analysis group that measures the state's economic pulse. Articles are focusing on the four units that make up Research Administration and the services they provide to the public and private sectors, plus looking at what the future holds for this five-year-old agency. This month, the Technical Support unit is discussed.

The Technical Support unit of Research Administration (RA) can be compared to the proverbial "unsung hero." Although Technical Support is RA's smallest unit in terms of employees (5), and its work does not receive the exposure of RA's other units, the functions and expertise the unit provides put it on par with RA's larger units.

Technical Support has two primary functions -- performing a variety of research tasks, and overseeing RA's computer operation. Without the latter, it would be nearly impossible for RA's four units to perform their primary task of collecting, analyzing and disseminating labor market information.

Technical Support Manager Bill Bowen says his unit's goal is to lend assistance to projects that RA's workers lack the time or expertise to complete -- be it computers or other research. Bowen, who has spent all of his 10 years in state service working with labor market information, likes to think of his staff as "researchers at large."

Heading up Technical Support's research department is Supervisor Stan Gorodenski, who has a staff of two research and statistical analysts,

(Continued on page 6)

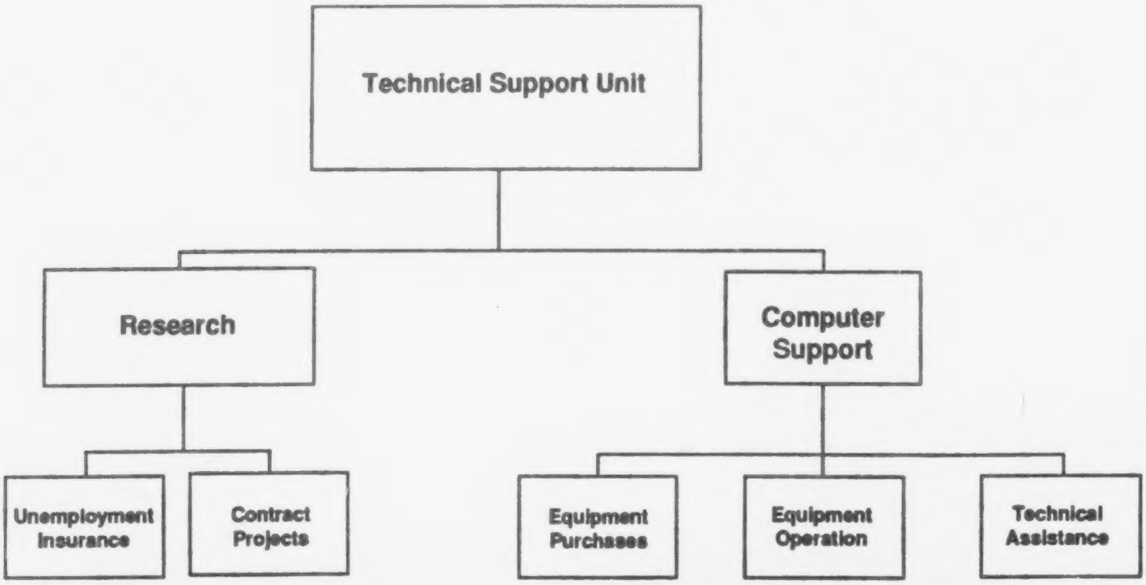


Figure 3. Functions of Research Administration, Technical Support Unit

(Continued from page 5)

Nezhat McCain and Don Davignon. Also performing U.I. research is Cindy Smith, a research and statistical assistant who reports directly to Bowen.

For the most part, research provided by Technical Support involves data relating to Unemployment Insurance (UI), which by no coincidence is the DES division where Gorodenski came from prior to RA's creation.

UI research can be broken down into two areas -- long- and short-range economic forecasts, and contract work.

> *... a high priority will be given to providing a personal computer at each desk in RA, which will allow users to access software programs currently not available on the mainframe computer.*
>
> *--Bill Bowen,*
> *Technical Support Manager*

Long-range forecasts are used to predict the future work load of the state's UI program and solvency of the UI Trust Fund. The estimates aid the federal government in determining how much money needs to be allocated to run the state's UI offices the following fiscal year, and help the state Legislature determine the maximum UI benefits Arizona can pay to displaced workers when various economic scenarios are considered.

Aiding in the long-range projections for the UI Trust Fund and work load are the development and maintenance of economic forecasting models and data bases, which have been set up by Gorodenski and McCain. Data on the Trust Fund are updated quarterly, while the work load information is revised monthly.

Technical Support's short-term research involves compiling monthly data on general UI activity in Arizona. Included in this information are: the number of UI claimants, the average time of unemployment, the amount of benefits paid, and the UI Trust Fund balance. All told, Technical Support gener-ates nearly 40 computer reports that are sent to the federal government and UI management in Arizona to keep track of how efficiently the state's UI program is operating.

Contract research is additional work Technical Support is assigned from special projects RA bids on or is requested to do by a government agency or a public or private organization.

Currently, a major part of the contract research Technical Support is performing involves conducting tests for the Permanent Mass Layoff and Plant Closing (PMLPC) program, which the Bureau of Labor Statistics (BLS) is using to determine what happens to displaced workers -- after they've been laid off. Part of the research involves contacting an employer when 50 or more of its workers apply for UI benefits within a three-week period, to verify if the company has had a permanent mass layoff or has just been steadily laying off workers.

Technical Support is also presently doing contract research for a private company to help estimate the potential supply of agricultural labor workers among unemployed individuals in Arizona. This study is related to the Immigration Reform and Control Act that was passed by Congress a few years ago.

The second major area of responsibility of Technical Support is overseeing RA's computer operation -- from purchasing and maintaining equipment to providing assistance to all users.

(Continued on page 7)

(Continued from page 6)

Bowen says it was determined when RA was created in 1984 that to be consistent and avoid wasting funds, there would be "one person who would make priority decisions" regarding computer equipment, and act as liaison between RA and the Office of Data Administration, where purchases of DES equipment are approved. As head of Technical Support and having 20 years of computer experience, Bowen was the natural choice.

Besides deciding purchases, Technical Support's other computer-related responsibilities include keeping operational RA's personal computers, local area network (LAN) and printing devices, plus giving support to RA's computer users.

"Most everyone in the (Technical Support) unit provides technical help" to RA's staff, says Bowen, who also teaches a DES-wide class covering the department's policy on protection of DES data, and computer hardware and software.

As for Technical Support's future, Bowen says a high priority will be given to providing a personal computer at each desk in RA, which will allow users to access software programs currently not available on the mainframe computer. By doing that, "productivity will be increased and it will free up more time for analysis (of data)," he says.

Bowen is also hopeful his staff can be increased. Technical Support is currently operating with three fewer people than the unit requires. This has led to a reduction in the research the unit can perform, Bowen says.

RA's Population Statistics unit will be discussed in the July issue of the Arizona LMI Newsletter.

--Brent Fine
Arizona LMI Newsletter Editor

OES Unit to Collect Data on Manufacturers, Hospitals for '89 Survey

Manufacturing and hospital establishments are the target of the 1989 Occupational Employment Statistics (OES) survey in Arizona.

The OES program is a federal-state cooperative effort that determines by industry each state's current and future demand for occupational employment.

For 13 years, the OES unit of DES, Research Administration, has been collecting data with the support of the Arizona business community. Employment information from the OES program has become an integral part of Arizona's education and occupational planning efforts.

Employers, planners and other users have access to the completed data through the *Occupational Employment Forecasts*, yearly publications for each county that detail the current and expected demand for occupations; and through the *Occupational Profile* series on major industries in the state. Career guidance counselors, students, and other users also have access to the final data through the MICRO OIS, a data base developed by the Arizona State Occupational Information Coordinating Committee (ASOICC) that is available at more than 50 locations in the state.

Data for this year's survey will be collected in person from large employers (more than 100 employees). Small employers can complete the survey by filling out a form, or over the phone by calling 1-800-321-0381 (outside metropolitan Phoenix) or 542-6485 (inside the local area).

--Cyprian Eboh,
OES Supervisor

Four Arizona Cities Make List of Top 'Micro Areas'

Four Arizona cities are ranked among the top 25 fastest-growing "micropolitan areas" in the country, according to an article in the May issue of *American Demographics*.

A micropolitan area is defined as a single county with at least 40,000 residents, including a core city with at least 15,000 residents, or an independent city with a population of 15,000.

The combined area of Bullhead City-Lake Havasu City ranked second out of 219 micropolitan areas in population growth between 1980 and 1986 with an increase of 37.1 percent; Prescott was ninth in population growth with a rate of 24.4 percent; and Flagstaff, 22nd, with a growth rate of 14.8 percent. The fastest growing micropolitan area was Rio Rancho, N.M., at 48.6 percent.

Prescott and Bullhead City-Lake Havasu City also ranked high among micropolitan areas with older populations. Prescott was second, with a median age of 39, while Bullhead City-Lake Havasu City was fourth, with a median age of 37. Flagstaff, on the other hand, had one of the youngest populations (8th), with a median age of 23.2. Flagstaff also was tied for 11th with five other areas in the "most educated" category, with a median of 12.8 years of school completed among people age 25 and above.

Micropolitan areas, a term coined by the article's author, G. Scott Thomas, are important because they are "are under-served markets deserving of more business attention."

Other distinguishing features of micropolitan areas, Thomas says, include:

- a median age below the national rate.
- more than half are within 50 miles of the center of a metropolitan area.
- a minority population smaller than the national average.
- often are the home of college towns, military bases, and retirement communities.

LMI Publications -- Hot off the Press

The following recently revised publication prepared by DES, Research Administration, can be ordered from the address on the back of this newsletter or by calling (602) 542-3871. One copy of the publication will be sent at no charge; multiple copies at a nominal charge to help cover the cost of printing. Other DES offices can order directly from DES supply.

The *1988 Small Employer Wage Survey* for Maricopa and Pima counties (PAL-331 and PAL-336) lists the hourly low, high, and average wage paid in various occupations by companies with fewer than 100 employees.

Wage information is given for the following industrial categories: Construction; Manufacturing; Transportation, Communications, and Public Utilities; Wholesale Trade; Retail Trade; Finance, Insurance, and Real Estate; and Services.

Also provided in each book are a summary table that aggregates the wage data across industries, analysis of wage structure in relation to the economy, and occupational definitions.

The Arizona Labor Force in April

Arizona's unemployment rate edged down to 5.8 percent in April, from 5.9 percent in March, while the nation's rate climbed from 5.0 percent to 5.3 percent.

The Arizona rate declined as 17,100 more residents found jobs and 4,600 dropped from the ranks of the unemployed, netting a modest increase in the labor force. The Arizona labor force grew 12,500 in April compared to 22,000 in the same month last year.

In April, an indicator of Arizona's slow growth was weaker payroll employment growth. Payroll employment increased 3,200, for only a two-tenths of a percentage point growth rate over the month. The average monthly gain in payroll employment in April during the last five years has been about 10,000.

The service-producing sectors continue to add most of the jobs, while the goods-producing industries added few.

In the goods-producing sector, only Manufacturing showed a slight growth in employment (300). All of the growth was in the nondurable goods sector, especially in food and kindred products.

Among durable goods, the machinery sector posted a loss of 400 jobs in April, adding to March's loss of 500. The loss in machinery employment was offset by an increase of 100 in employment in the defense-related aircraft and missiles industry, and 300 in all other durable goods. The aircraft and missiles industry has been losing jobs for more than two years, and its outlook remains poor as the effort to reduce the federal budget deficit continues.

Construction, after a one-month spurt in March, continued its downward trend in April as a total of 300 jobs were lost. Usually, construction jobs increase during the spring months, but employment has slumped for the last two spring seasons. During the last 12 months ending in April, Construction has lost a total of 3,700 jobs, and in the prior year it lost 10,400.

On the positive side, job losses of 3,700 over the year may indicate that the rate of decline has slowed. On the negative side, there still exists a sufficient inventory of office and multifamily housing space, and higher interest rates may stall any chance of a rebound in Construction this year.

Employment in Mining, after holding at 12,100 during February and March, declined in April by 100. Further declines in this industry are not expected in the near-term.

In the service-producing sectors, Trade showed most of the strength; followed by Services; and Finance, Insurance, and Real Estate (FIRE). Employment in retail trade increased by 1,400 in April, whereas the average gain in this industry in the last five years was 1,300. Most of the gains registered in April were in general merchandise and apparel (500) and "other retail trade" (400).

Services-industry employment growth usually slows with the end of the winter tourism season in May, but this year it began to slow in April. Services added only 1,300 new jobs in April, for a 1.9 percent growth rate over the last 12 months. The average gain in April for the last five years has been more than 4,000.

(Continued on page 14)

Arizona Labor Force and Employment

April 1989 (in thousands)

	Arizona				
				Amount Change	
	Apr.* 1989	Mar. 1989	Apr. 1988	Mar.-Apr.	1988-1989
TOTAL CIVILIAN LABOR FORCE**	1706.2	1693.7	1635.1	+12.5	+71.1
Total Unemployment	92.5	97.1	101.4	-4.6	-8.9
Rate	5.4	5.7	6.2	----	----
Rate (Sea. Adj.)***	5.8	5.9	6.7	----	----
Total Employment	1613.7	1596.6	1533.7	+17.1	+80.0

The Above Labor Force Statistics Should N

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Apr.* 1989	Mar. 1989	Apr. 1988	Mar.-Apr.	1988-1989
TOTAL WAGE AND SALARY	1444.2	1441.0	1422.6	+3.2	+21.6
Manufacturing	190.1	189.8	189.4	+0.3	+0.7
Durable Goods	145.4	145.4	146.5	+0.0	-1.1
Stone, Clay, and Glass	7.6	7.6	7.8	+0.0	-0.2
Primary and Fabricated Metals	15.8	15.8	15.5	+0.0	+0.3
Primary Metals	7.6	7.6	7.4	+0.0	+0.2
Fabricated Metals	8.2	8.2	8.1	+0.0	+0.1
Machinery	64.5	64.9	66.4	-0.4	-1.9
Other Durable Goods	57.5	57.1	56.8	+0.4	+0.7
Aircraft and Missiles	26.3	26.2	26.6	+0.1	-0.3
Lumber and Wood Product (Excluding Furniture)	8.3	8.3	8.2	+0.0	+0.1
All Other Durable Goods	22.9	22.6	22.0	+0.3	+0.9
Nondurable Goods	44.7	44.4	42.9	+0.3	+1.8
Food and Kindred Products	9.5	9.3	9.1	+0.2	+0.4
Apparel	4.7	4.7	4.7	+0.0	+0.0
Printing and Publishing	17.0	16.9	16.7	+0.1	+0.3
All Other Nondurable Goods	13.5	13.5	12.4	+0.0	+1.1
Mining and Quarrying	12.0	12.1	11.8	-0.1	+0.2
Copper Mining	9.0	9.0	8.8	+0.0	+0.2
Other Mining and Quarrying	3.0	3.1	3.0	-0.1	+0.0
Construction	89.1	89.4	92.8	-0.3	-3.7
Trans., Communications, & Public Utilities	72.5	72.5	73.5	+0.0	-1.0
Transportation	36.8	36.6	36.6	+0.2	+0.2
Communications and Public Utilities	35.7	35.9	36.9	-0.2	-1.2
Trade	360.2	358.7	347.3	+1.5	+12.9
Wholesale Trade	69.7	69.6	68.2	+0.1	+1.5
Retail Trade	290.5	289.1	279.1	+1.4	+11.4
General Merchandise and Apparel	44.9	44.4	42.5	+0.5	+2.4
Food Stores	48.4	48.3	46.0	+0.1	+2.4
Automotive and Service Stations	35.3	35.0	33.5	+0.3	+1.8
Eating and Drinking Places	102.0	101.9	98.8	+0.1	+3.2
Other Retail Trade	59.9	59.5	58.3	+0.4	+1.6
Finance, Insurance, and Real Estate	92.5	92.1	94.5	+0.4	-2.0
Services and Miscellaneous	372.5	371.2	365.6	+1.3	+6.9
Hotels and Other Lodging Places	43.4	43.3	41.2	+0.1	+2.2
Business Services	77.8	77.9	79.1	-0.1	-1.3
Health Services	92.8	92.4	91.0	+0.4	+1.8
Other Services	158.5	157.6	154.3	+0.9	+4.2
Government	255.3	255.2	247.7	+0.1	+7.6
Federal	44.0	43.8	42.9	+0.2	+1.1
State and Local	211.3	211.4	204.8	-0.1	+6.5
School	120.9	121.3	119.6	-0.4	+1.3

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

April 1989 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
Apr.* 1989	Mar. 1988	Apr. 1988	Mar.- Apr.	1988- 1989	Apr.* 1989	Mar. 1988	Apr. 1988	Mar.- Apr.	1988- 1989
1057.1	1047.3	1016.1	+9.8	+41.0	323.1	320.0	310.4	+3.1	+12.7
47.1	50.6	51.6	-3.5	-4.5	15.1	15.6	16.2	-0.5	-1.1
4.5	4.8	5.1	----	----	4.7	4.9	5.2	----	----
4.8	4.8	5.4	----	----	4.9	4.9	5.4	----	----
1010.0	996.7	964.5	+13.3	+45.5	308.0	304.4	294.2	+3.6	+13.8

Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

948.6	947.0	938.1	+1.6	+10.5	252.7	252.3	250.0	+0.4	+2.7
138.9	138.8	138.0	+0.1	+0.9	29.5	29.4	30.9	+0.1	-1.4
107.6	107.8	107.6	-0.2	+0.0	23.7	23.6	25.1	+0.1	-1.4
4.9	4.9	5.1	+0.0	-0.2					
10.5	10.5	10.2	+0.0	+0.3					
52.0	52.4	53.1	-0.4	-1.1					
40.2	40.0	39.2	+0.2	+1.0					
31.3	31.0	30.4	+0.3	+0.9	5.8	5.8	5.8	+0.0	+0.0
6.1	6.0	6.1	+0.1	+0.0					
3.5	3.4	3.5	+0.1	+0.0					
12.0	12.0	11.9	+0.0	+0.1					
9.7	9.6	8.9	+0.1	+0.8					
0.8	0.8	0.7	+0.0	+0.1	2.0	2.0	1.8	+0.0	+0.2
60.5	61.2	63.8	-0.7	-3.3	16.3	16.0	17.0	+0.3	-0.7
50.5	50.3	50.2	+0.2	+0.3	9.1	9.0	9.2	+0.1	-0.1
27.1	26.9	26.4	+0.2	+0.7	4.6	4.5	4.8	+0.1	-0.2
23.4	23.4	23.8	+0.0	-0.4	4.5	4.5	4.4	+0.0	+0.1
243.7	243.0	235.7	+0.7	+8.0	58.1	57.9	56.7	+0.2	+1.4
55.8	55.4	54.5	+0.4	+1.3	7.0	7.1	7.0	-0.1	+0.0
187.9	187.6	181.2	+0.3	+6.7	51.1	50.8	49.7	+0.3	+1.4
28.5	28.3	27.5	+0.2	+1.0	7.4	7.2	7.3	+0.2	+0.1
31.4	31.5	29.5	-0.1	+1.9	8.0	8.1	8.0	-0.1	+0.0
22.6	22.4	21.1	+0.2	+1.5	5.4	5.4	5.4	+0.0	+0.0
65.1	65.4	63.5	-0.3	+1.6	18.9	18.9	18.3	+0.0	+0.6
40.3	40.0	39.6	+0.3	+0.7	11.4	11.2	10.7	+0.2	+0.7
73.7	73.4	75.1	+0.3	-1.4	11.8	11.7	12.4	+0.1	-0.6
250.8	250.0	247.4	+0.8	+3.4	70.1	70.2	68.4	-0.1	+1.7
26.0	26.3	24.4	-0.3	+1.6	7.1	7.1	7.0	+0.0	+0.1
61.1	60.9	62.7	+0.2	-1.6	11.3	11.8	11.5	-0.5	-0.2
60.2	60.0	59.7	+0.2	+0.5	20.2	20.0	19.4	+0.2	+0.8
103.5	102.8	100.6	+0.7	+2.9	31.5	31.3	30.5	+0.2	+1.0
129.7	129.5	127.2	+0.2	+2.5	55.8	56.1	53.6	-0.3	+2.2

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Apr.* 1989	Mar. 1989	Apr. 1988	Apr.* 1989	Mar. 1989	Apr. 1988	Apr.* 1989	Mar. 1989	Apr. 1988
Manufacturing	402.46	402.87	401.96	40.9	40.9	41.1	9.84	9.85	9.78
Aircraft & Missiles	604.56	601.04	INA	44.0	44.0	INA	13.74	13.66	INA
Food & Kindred Prod.	319.95	333.72	360.30	39.5	40.5	39.9	8.10	8.24	9.03
Primary Metals	507.18	516.78	469.94	39.5	39.6	38.3	12.84	13.05	12.27
Machinery	395.34	397.36	401.57	40.3	40.3	41.7	9.81	9.86	9.63
Copper Mining	544.00	556.38	514.95	42.7	42.7	41.9	12.74	13.03	12.29
Construction	438.73	423.40	427.78	36.5	35.7	36.5	12.02	11.86	11.72
Utilities	691.39	656.99	636.01	41.5	39.2	42.8	16.66	16.76	14.86
Retail Trade**	252.88	247.41	244.94	33.1	32.9	33.1	7.64	7.52	7.40
Wholesale Trade	368.24	364.43	393.23	38.6	38.2	39.6	9.54	9.54	9.93

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Apr.* 1989	Mar. 1989	Apr. 1988	Apr.* 1989	Mar. 1989	Apr. 1988	Apr.* 1989	Mar. 1989	Apr. 1988
Manufacturing	424.95	427.63	429.11	40.9	41.0	41.5	10.39	10.43	10.34
Construction	449.55	443.09	447.60	37.0	36.2	36.9	12.15	12.24	12.13
Retail Trade**	270.18	267.69	270.06	33.9	34.1	33.8	7.97	7.85	7.99
Wholesale Trade	389.27	382.69	408.18	39.4	38.5	39.9	9.88	9.94	10.23

Estmated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Apr.* 1989	Mar. 1989	Apr. 1988	Apr.* 1989	Mar. 1989	Apr. 1988	Apr.* 1989	Mar. 1989	Apr. 1988
Manufacturing	365.95	369.40	374.01	38.4	38.6	39.0	9.53	9.57	9.59
Copper Mining	574.60	587.52	544.42	42.5	43.2	42.8	13.52	13.60	12.72
Construction	401.68	393.02	386.34	37.4	36.8	36.9	10.74	10.68	10.47
Utilities	577.69	579.10	574.75	41.0	41.1	41.8	14.09	14.09	13.75

*Preliminary.

**Excludes eating and drinking places.

Note: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
April 1989

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	15,400	35,425	43,900	12,775	9,050	2,950	5,700
Total Unemployment	2,000	2,325	2,525	1,200	700	275	425
Rate	13.0%	6.6%	5.8%	9.4%	7.7%	9.3%	7.5%
Rate (Seas. Adj.)**	15.6%	6.6%	7.0%	9.5%	8.1%	9.8%	8.5%
Total Employment	13,400	33,100	41,375	11,575	8,350	2,675	5,275

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	15,350	25,625	40,150	10,800	5,775	2,800	3,800
Manufacturing	875	1,225	2,950	1,375	200	50	325
Mining & Quarrying	50	125	150	1,300	0	1,550	100
Construction	950	875	1,650	625	200	175	225
T.C.P.U.	1,800	1,500	2,675	375	150	50	75
Trade	1,575	5,900	9,350	2,150	1,525	225	1,275
F.I.R.E.	325	700	950	275	100	25	100
Services & Misc.	4,425	4,850	10,275	2,050	925	150	900
Government	5,350	10,450	12,150	2,650	2,675	575	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	32,950	27,025	39,425	10,525	38,100	52,825
Total Unemployment	1,700	2,825	2,825	900	1,975	10,700
Rate	5.2%	10.5%	7.2%	8.6%	5.2%	20.3%
Rate (Seas. Adj.)**	5.5%	12.2%	7.5%	13.6%	5.2%	19.9%
Total Employment	31,250	24,200	36,600	9,625	36,125	42,125

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	22,725	20,225	31,375	10,000	25,825	28,600
Manufacturing	2,700	2,025	4,175	1,275	2,300	2,225
Mining & Quarrying	175	1,175	3,650	0	850	50
Construction	1,650	950	1,300	325	2,025	1,425
T.C.P.U.	1,150	1,750	925	575	950	1,050
Trade	6,900	4,050	5,600	4,175	7,100	8,675
F.I.R.E.	1,000	400	800	275	1,000	1,025
Services & Misc.	5,400	4,475	4,300	1,625	5,875	6,300
Government	3,750	5,400	10,625	1,750	5,725	7,850

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
April 1989

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,706,191	1,613,654	92,537	5.4%
Apache	15,406	13,410	1,996	13.0
Cochise	35,422	33,088	2,334	6.6
Coconino	43,895	41,363	2,532	5.8
Gila	12,767	11,575	1,192	9.3
Graham	9,037	8,338	699	7.7
Greenlee	2,943	2,679	264	9.0
La Paz	5,714	5,286	428	7.5
Maricopa	1,057,028	1,009,976	47,052	4.5
Mohave	32,954	31,251	1,703	5.2
Navajo	27,037	24,209	2,828	10.5
Pima	323,146	308,035	15,111	4.7
Pinal	39,408	36,592	2,816	7.1
Santa Cruz	10,522	9,618	904	8.6
Yavapai	38,096	36,114	1,982	5.2
Yuma	52,815	42,120	10,695	20.2

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in April

(Continued from page 9)

Business services employment in April declined by 100 for the first time in at least the last five years. Both the health services, and "other services" categories posted less than normal seasonal gains (400 and 900).

For the last four months, FIRE has added jobs. It added another 400 jobs in April, although there has been a 2.1 percent decline in the last 12 months. Even with the increase in jobs, it is too early to declare a turnaround for this industry, because recovery depends on future interest rates and growth in personal income.

Transportation, Communications, and Public Utilities (TCPU) held steady at 72,500 jobs in April. Government added 100 jobs last month, which translated into 3.1 percent growth over the previous 12 months.

--Ron Simon,
Economic Analysis Manager

Summer Jobs in Private Sector are Drying Up, Official Says

Like the outlook for full-time employment in Arizona, the summer job picture for youth is not bright on the private sector side, according to an official with a Valley business organization that finds summer employment for students.

Job placement opportunities for the Summer Jobs for Youth Campaign are down about 15 percent from 1988, and have been going down steadily the past three years, says Emmett McNulty, executive director of the Arizona Alliance of Business.

"There's an air of pessimism from employers," says McNulty, whose organization landed about 600 jobs from the private sector this year. Most of the jobs have 40-hour work weeks and pay an average of $4 to $4.50 per hour.

Employment opportunities secured by the alliance are handled by the DES Job Service, but McNulty says "many of these jobs evaporate before they are called in," meaning they are publicized by word of mouth and filled prior to getting to the state agency. The net effect: "If we come up with 400 placements ... we would be very fortunate," McNulty says.

The alliance was 25 percent behind the number of job opportunities it secured last year following its annual phone drive, McNulty says, but through the efforts of a few members, the non-profit organization was able to bring its job opportunities up to a respectable level.

The state's faltering economy, however, has had no effect on summer jobs federally funded by the Job Training Partnerhsip Act (JTPA).

"We have a relatively stable source of funding ($9 million)," says Dayne Coffey, director of Management Information Systems for the Arizona JTPA office.

DES Job Service Offices

Metropolitan Phoenix	
9801 N. 7th St.	997-2681
438 W. Adams St.	252-7771
3405 N. 51st Ave.	247-3304
4635 S. Central Ave.	276-5587
7 S. Hibbert St., Mesa	834-7777
Metropolitan Tucson	
195 W. Irvington	628-5517
316 W. Ft. Lowell	293-1919
4525 E. Broadway	628-5138
Yuma	
201 S. 3rd. Ave.	783-1221
Prescott	
234 N. Gove	445-5100
Flagstaff	
2705 N. 4th St.	779-6668
Kingman	
301 Pine St.	753-4333
Globe	
605 S. 7th St.	425-3101
Douglas	
1130 F Ave.	364-4446
Sierra Vista	
2981 E. Tacoma	458-4005
Nogales	
479 Grand Ave.	287-2681

Other Organizations

Phoenix	
Call-a-Teen	252-6721
Chicanos por la Causa	257-0700
Tucson	
Pima Youth Placement Program	623-5405
Flagstaff	
Native Americans for Community Action	526-2968

Figure 4. Places to Contact for Summer Jobs.

JTPA, which works with the DES Job Service and employment centers to match up students with employers, expects to fully fund about 6,800 minimum-wage ($3.35 an hour) jobs this summer, about the same as last year. The jobs, which are aimed at economically disadvantaged youth, are primarily with public or non-profit agencies.

JTPA will have no trouble filling its openings, Coffey says. "We always have more kids than we can serve."

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported from these sources.

MANUFACTURING - **Balboa Sportswear** is closing its manufacturing plant in Yuma, laying off 100 full-time and 26 part-time employees, primarily seamstresses. Balboa, based in Los Angeles, says increased foreign competition forced the closure. Another California sportswear manufacturing company, however, plans to lease Balboa's building at 185 S. Main St. The company's name and the number of employees it will hire have not been made public.

A manufacturer of rebuilt electrical parts for automobiles plans to open a plant in Yuma by fall, initially employing 150 people. **Automotive Parts Exchange** was expected to break ground in June on a 145,000-square-foot plant north of Highway 80 and west of Avenue 3½E. A major supplier of rebuilt starters, alternators, generators and smog pumps, the company says it's leaving its current headquarters in Orange County, Calif., due to lack of available labor. The average wage for workers in the shop will be $8 and $9 an hour; administrative staff will earn $20,000 to $35,000.

Pennex Products Co. Inc. of Verona, Pa., is expected to build a manufacturing and warehouse facility in Phoenix for its pharmaceutical products, and health and beauty aids. The 50,000-square-foot plant, to be located at 601 S. 54th Ave., is expected to open in spring 1990 and lead to employment of 75 people by 1992, a Pennex spokesperson says.

Systems Marketing, a Phoenix-based computer-equipment leasing company, is being sold by its parent company, Commercial Federal Corp. of Omaha as part of a restructuring effort. A Commercial Federal spokesperson said it was unsure what would happen to the 50 Systems Marketing workers.

Garrett Engine Division of Phoenix has been awarded a contract to build 800 engines plus spare parts for the 29-passenger Jetstream 41 aircraft, manufactured by British Aerospace Commercial Aircraft. The contract, potentially worth $1 billion over the next 20 years, is not expected, however, to lead to any additions to Garrett's current work force of 4,000.

Hughes Aircraft Co. announced in early June it will eliminate 6,000 jobs from operations in 12 states. Hughes says expected defense budget cuts are the reason for the layoffs. Hughes, which has a work force of 75,000, employs 6,000 at its Missile Systems Group in Tucson, where advance tactical-missile systems are produced. The Tucson facility has already let go 500 workers in 1989 and 3,000 since 1986.

Mother Nature may have something to do with good employment news at **McDonnell Douglas Helicopter Co.** in Mesa. A May thunderstorm with 95-mph winds damaged 100 Apache helicopters -- 35 seriously -- at Fort Hood, Texas. At this point, the Army has not decided how many Apaches it will replace or repair. Ironically, McDonnell Douglas laid off 355 employees in early May because of an expected decrease in orders for the Apache.

Only 3.8 percent of **manufacturing**

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employees in the state were union **members** in 1988, down from 5.3 percent in 1984. Arizona, which is a "right-to-work" state, ranked 48th among states in union membership of manufacturing employees last year, only ahead of South Carolina (3.1 percent) and South Dakota (2.7 percent). Right-to-work means workers cannot be deprived employment because they do not belong to a union where they work.

MINING - Arizona's 9,500 **copper workers** had **average earnings** of $758 a week in 1988, nearly $200 more than workers in the next highest-paying industry -- manufacturing -- who earned $578 a week. The salary difference highlights the strength of the copper industry, which saw its production rise more than 10 percent and prices increase 40 percent over 1987 figures.

TRADE - **Black Forest Backerei**, which specializes in German breads and pastries, has opened a corporate headquarters and bakery, along with four retail outlets, all in metropolitan Phoenix. The company, which will employ 60 people at its headquarters and outlets, plans to have eight to 10 retail locations by 1990.

The first of four **Imaginarium** toy stores planned for Arizona has opened at Paradise Valley Mall in Phoenix. The Calif.-based chain, which encourages "hands-on" tests of its merchandise and calls its salespeople "toyologists," will also open stores at Metrocenter, Fiesta Mall in Mesa and Scottsdale Fashion Square.

In early June, federal Bankruptcy Court was expected to listen to plans of potential buyers of **A.J. Bayless Markets Inc.** The 60-year-old Arizona supermarket chain, which filed for reorganization in February 1988, has dwindled to 10 stores from 36, and now has 800 to 900 employees. No stores remain in Phoenix.

Several national retail chains have recently announced plans or have broken ground for new stores in the state. **Wal-Mart** plans a 114,000-square-foot store in the proposed SunTech Town Center at Alma School and Warner roads in Chandler. ... **Smith's Management Corp.**, a Utah-based grocery chain, will begin building a Smith's superstore in Show Low this summer. The store, to be located at Deuce of Clubs and White Mountain Road, is expected to employ between 180 and 200 people. ... Building is under way for a 114,000-square-foot **Price Club** store and 4,200-square-foot auto center at Elliot and Priest roads in Tempe. Completion of the project is expected by mid-August.

FINANCE, INSURANCE and REAL ESTATE - **Del Webb Corp.** of Phoenix announced in May it will build its third **Sun City** retirement community in the Valley. The unannounced site will cover several thousand acres and include 3,000 to 12,000 homes, the company said. Sun City and Sun City West, located in the northwest Valley, are Webb's other Phoenix-area retirement communities.

Mexico's fourth-largest bank plans to open a regional headquarters in Tucson in the near future. **Banco Internacional S.N.C.**, which has offices in Texas and California, says it plans to capitalize on the "tremendous" market in Nogales and Tucson's central location. The bank expects to employ as many as 40 people at the Tucson location.

TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES - Phoenix-based **America West Airlines** experienced some ups and downs in May. First, the air carrier announced it would build an eight-story, $55 million

(Continued on page 18)

(Continued from page 17)

office tower at Sky Harbor International Airport to house its flight-crew and maintenance operations. The tower, which would be south of its hangar complex, will provide offices, training rooms and other space for the airline's 1,800 customer-service representatives and 800 pilots. Later in the month, America West was awarded landing rights at LaGuardia and Washington National airports. The slots, won in a government lottery, were previously owned by bankrupt Eastern Airlines. America West had sought landing rights for two years. The airline's luck finally came to an end May 24, though, when Donald Trump won approval to buy Eastern Airlines. The Phoenix airline was unable to secure financing to buy the ailing air carrier.

Several snags have arisen concerning the proposed plans of **Imagineering Systems Corp.** (See "New Developments," *Arizona LMI Newsletter*, March 1989 and April 1989.) The Irving, Texas-based company, which previously announced it wanted to operate an aircraft maintenance, modification, and customer-service facility at Tucson International Airport, has been unable to come to an agreement with the Tucson Airport Authority's Operations Council on a lease of 150 acres at the airport. The council wants Imagineering, which is a new company, to sublease the property from Learjet Corp., which presently leases the property, until the Texas company establishes a track record. In another development, Imagineering, which previously was quoted as saying it would eventually provide up to 3,000 jobs, denies that statement, and says it would employ about 215 people by 1995, along with 260 Learjet workers. Longer-term, Imagineering says it will employ 1,000 people.

GOVERNMENT - The Phoenix City Council has given approval to hire 23 additional police officers and paying overtime to increase patrols in high crime areas. The City Council's decision took effect immediately, instead of having to wait until the fiscal year begins July 1.

Arizona has OK'd two bills aimed at increasing **economic development** in the state. One measure now allows cities to offer tax incentives to businesses that locate in high unemployment areas. Companies that locate in these areas can receive up to $5,000 credit on state income taxes over three years. The other law creates two instant lottery games that will fund about $6 million a year in financial incentives to help businesses expand and encourage out-of-state companies to move to Arizona. The assistance will be in the form of loans, loan guaranties, and interest rate subsidies.

SERVICES AND MISCELLANEOUS - It may not be as classy as a Pointe resort, but **Rip Griffin's Truck/Travel Center** may have added some spice to truck drivers' lives when a $7 million complex opened in early June, 40 miles west of Phoenix. On Interstate 10 and 339th Ave., the 43,000-square-foot, four-building facility -- landscaped with 70 palm trees and 600 plants -- includes showers, Jacuzzi baths, laundry, and exercise room, along with a repair shop and parts store, truck wash, convenience store, and restaurant. The store, one of 70 owned by the AMBEST (America's Best Truck Stops) chain, will employ 150 people. The truck stop currently is looking for waitresses, and dining room and kitchen employees.

Hotel occupancy rates in Arizona were up about 2 to 3 percent in the first quarter of 1989 over the same period last year, according to the accounting practice of Touche Ross & Co. In addition, average room rates

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(Continued from page 18)

increased about $5 in the first quarter of '89 over the first quarter of '88, the company said. More than $5 billion in the state was spent on tourism in 1988.

DHL Worldwide Express officially announced in late May it will open a customer-service center in Tempe (See "New Developments," *Arizona LMI Newsletter*, May 1989). DHL will initially employ between 375 and 500 operators, telemarketers, and tracing agents in a 60,000-square-foot building at 52nd Street and University Drive. The new facility is a consolidation of more than 50 customer-service operations around the country.

Arizona is ripe for making movies, says the president of **Film Phoenix**, Wirt Morton, who has proposed building a $35 million film studio in southwest Phoenix. Morton says he's confident he'll be able to raise the money to build a 200,000-square-foot facility that would include a Hollywood-type sound stage.

Hold your fire! **The Institute for the Study of American Wars**, which had announced plans to build a $150 million war museum in Oklahoma instead of Arizona, has backed out of its decision. The group had problems in obtaining a donation of 300 acres of state land because the Oklahoma Constitution prevents such transfers. Several Arizona cities and the Gila River Indian Community have expressed interest in acquiring the museum. Stay tuned.

Calsonic International Inc. plans a $35 million expansion of its Nissan-Calsonic vehicle-testing center near Casa Grande that will add 185 employees by 1991. The expansion of the testing center, located 9 miles from Maricopa Road near Stanfield in Pinal County, will include a wind tunnel, durability test course, and new housing facilities. The Nissan-Calsonic center, which opened in 1987, was the first built in the United Sates by a Japanese auto manufacturer.

After six years on the sidelines, **Rillito Park Race Track** in Tucson had a successful 55-day racing schedule, track Manager Vincent Francia says. Rillito Park, owned by Pima County, had average daily attendance of 1,700 and took in $6.6 million. The track employed 200 people and is responsible for an influx of about 1,200 other people into the Tucson area, including jockeys, horsemen, and trainers.

The opening in August of the **Sears, Roebuck and Co. Telecatalog Center** in Tucson should be a boon to students, retirees, and others looking for part-time work. The $5 million center, to be located at the DevTech Building, 4775 S. Butterfield Drive, will operate from 6 a.m. to 10 p.m. daily, and will focus on catalog orders and product-availability inquiries from customers in the West. Hiring will be handled through DES Job Service starting around July 1.

Preliminary figures rank Arizona 29th among all states in **per capita personal income** in 1988 with an average of $14,887. Connecticut had the highest average ($22,761) and Mississippi the lowest total ($10,992). Arizona's average was slightly above the $14,282 average for Rocky Mountain states.

Arizona grew seventh fastest of all states in bankruptcies in 1988, totalling 13,774, compared to 11,467 in 1987. Smaller population growth, and a slowdown in the construction and real estate sectors were blamed for the large increase.

Correction

In the April newsletter, Maricopa County's 1988 estimated population was listed as 1,979,000. It should have read 1,979,700.

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XIII No. 7
July 1989

Unemployment Rate

Seasonally Adjusted
May*

ARIZONA	5.0%
Maricopa County	4.0%
Pima County	4.3%
UNITED STATES	5.2%

Consumer Price Index

U.S. - May 1989
Base = 1982-84

Wage Earner/Clerical Worker	122.5
% Chg. Year Ago	5.4
All Urban	123.8
% Chg. Year Ago	5.4

Phoenix - 1st Qtr 1989
Base = 1982-84

All Urban	123.7
% Chg. Year Ago	5.4

Tucson - 1st Qtr 1989
Base = 1982-84

All Urban	125.2
% Chg. Year Ago	3.6

* Preliminary

Health-Care Program Provides Safety Net for Working Uninsured, P. 2

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Experimental Program Gambles on Working Uninsured

Affordable Group-Health Coverage Offered to Small Firms, Self-Employed

In testimony before Congress in 1987, it was estimated there were 37 million Americans under age 65 who did not have health insurance.[1] Or another way to look at it: 37 million Americans were playing Russian Roulette with their financial security. One major illness or surgery and they might slip into debt for life.

In Arizona, the situation is no different, and the outlook is particularly bleak for the employees of small companies -- the backbone of the state's economy. According to a 1988 study of small businesses with under 25 employees, 43 percent of their employees (125,000 workers) were not being offered health insurance.[2] Also, a 1988 survey of 2,300 Arizona businesses with fewer than 10 employees showed 52 percent of those companies did not offer their employees medical insurance.[3]

> *Illustrating the potential risk for uninsured workers is the $5,600 it costs for an average stay (five days) in an Arizona hospital.*

Rising health care costs and the inability to obtain insurance for groups of 25 and fewer workers can be blamed for part of this problem.

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SITE CODE 733A
P.O. BOX 6123
PHOENIX, ARIZONA 85005-6123
(602) 542-3871

Brent Fine, Editor
Linda Van Calcar, Word Processor

"Insurance is something that is digging into people's pockets. We've had severe increases (in health care premiums) in the last year -- 50 percent in Arizona," says Jeff Komaiko, manager of the Southwestern Regional Service Center for John Alden Life Insurance Co., one of the country's largest providers of health insurance for companies with 25 or fewer employees.

In addition, Komaiko says, in the last five years the number of national companies offering insurance to businesses with 25 or fewer employees has gone from 500 to 100.

Adding to the problem is the fact that when employees and the self-employed purchase insurance, they often have to pay considerably more -- estimated between 20 and 40 percent by one expert[4] -- than if they bought insurance through a group plan; then factor in that businesses usually pay a portion of an employee's premium.

Illustrating the potential risk for uninsured workers is the $5,600[5] it costs for an average stay (five days) in an Arizona hospital. More serious problems -- heart attacks, major surgery -- can run into the tens of thousands of dollars.

The general public, however, is also put at risk by the uninsured through hidden costs that come out of the public's pocketbook. The cost of uncompensated health care is passed on to the public through higher

(Continued on page 3)

Highlights of The Health Care Group™ of Arizona Program

- Businesses must be located and members living in Arizona.
- 50 percent of a company's eligible employees must participate.
- No industries or occupations are excluded from coverage.
- Only companies without group coverage in past six months are eligible, unless coverage was lost due to a carrier going out of business or raising its minimum group size.
- To be eligible, employees must work at least 20 hours per week and have been employed for two months with the prospect of an additional five months of continuous work.
- Employer premium contributions are encouraged, but not required.
- Insurance is only offered by AHCCCS providers.
- Four "major-medical" type plans -- three with small co-payment options -- are offered.*

* Only two plans are currently offered in Pima County

Figure 1.

(Continued from page 2)

medical prices (doctors', hospital fees) or tax dollars to fund county hospitals and the state's indigent health care program, the Arizona Health Care Cost Containment System (ACHCCS). In 1987, uncompensated health care (charity and bad debt) provided by Arizona hospitals came to an estimated $171 million.[6]

Recognizing these problems, the Robert Wood Johnson Foundation of Princeton, N.J., has made the uninsured and underinsured a priority in its giving programs. Endowed by the estate of the late head of Johnson and Johnson Co., the foundation set aside $6.5 million in 1986 for a three-year experimental project called the "Health Care for the Uninsured Program."

As one of 15 state or municipal agencies to be awarded a grant, AHCCCS was given $346,000 in 1986 to develop "'an innovative solution to the problems of the working uninsured'" in Arizona.[7] AHCCCS, in turn, used the contribution to create The Health Care Group™ of Arizona, which, with few exceptions, offers medical insurance plans -- through current AHCCCS providers -- to companies with 25 or fewer workers who do not have group insurance, and for self-employed individuals (Figure 1).

The idea for The Health Care Group was to provide "reasonable, affordable coverage" to workers and their dependents who earn too much money to qualify for AHCCCS, but do not have health insurance, says The Health Care Group's temporary director and program manager, Gail Gesell. Currently, to qualify for AHCCCS -- Arizona's equivalent to Medicaid -- an individual cannot have an adjusted gross income of more than $3,200; or more than $4,266 for a couple; or more than $5,354 for a family of four.[8]

A 1989 AHCCCS report indicates there is a strong need for a program for the state's working uninsured. The report, "AHCCCS Overview," says 529,000 Arizonans (230,000 workers; 295,000 dependents) may qualify for this new program,[9] although these figures may be somewhat misleading because some of those eligible may already receive medical coverage through other workers in the family.

At present, The Health Care Group program, which began operation in

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the fall of 1987, is only offered in Pima County. Pima County has approximately 200 employee groups with a total of 800 enrollees -- doubling in size in the last six months --, says Gesell.

The safety-net program, however, is expected to be available in Cochise County by fall, and offered in Maricopa County by next year. "We're working closely with several health plans" to join The Health Care Group in Maricopa County, says Gesell, adding that there are "all kinds of people wanting to sign up (for health insurance)." (The Health Care Group was available in Maricopa County during 1987, but the provider was unable to keep up with the demand of its AHCCCS patients, says Gesell, so the provider and the program were dropped in the Phoenix metropolitan area.)

Part of the problem in getting The Health Care Group program going on a statewide basis has been the requirement that underwriters only be AHCCCS providers, thus limiting the number of possible carriers to negotiate with, Gesell says. But Arizona isn't alone, as other programs funded by the Robert Wood Johnson Foundation also "have experienced delays in contracting with health care providers and identifying underwriters ...," reports the foundation in an article in the Summer 1989 issue of its publication *Advances*.

Nevertheless, the article continues, the foundation considers the project a success because it "is producing important information about the viability of developing partnerships between the public and private sector in providing health insurance for the nation's working uninsured."

And Arizona's program is considered one of the more successful and important programs being funded, says the executive director of a comparable program in Florida. Because Arizona does not put any restrictions on its enrollees (see below), "the utilization experience is some of the most valuable data on small company employees and their dependents," says Ree Sailors, head of Florida HealthAccess. Arizona's program "refutes the philosophy that these people are health risks."

Gesell says The Health Care Group, which offers four "major-medical" type plans (three with either small or no copayment options), is not in competition with other health care providers and in many cases is offering a service that otherwise would not be available to uninsured workers and their dependents.

> *About 60 to 70 percent of companies pay some portion of the employee's premium, ... with a much smaller percentage contributing to an employee's premium for dependents.*
>
> *--Gail Gesell*
> *Acting Manager, The Health Care Group™ of Arizona*

"We provide health care coverage to working people and employee groups that are unable to find coverage," she says. "We help people keep a level of stability and keep them from becoming indigent."

Gesell adds that The Health Care Group does not "exclude any group by industry (such as miners) ... or kind of illnesses they experienced," while other carriers "have various mechanisms for excluding groups," such as requiring a minimum number of people, or making employers pay 50 percent of premiums.

Not unlike most major-medical policies, the HCG plans do have a number of exclusions, including no

(Continued on page 6)

RA Unit Knows Estimating, Projecting Population of State is no Piece of Cake

In an effort to give readers a better understanding of the functions of DES, Research Administration, for the last several months the Arizona LMI Newsletter has been taking an in-depth look at the data-gathering and analysis group that measures the state's economic pulse. Articles have been focusing on the four units that make up Research Administration and the services they provide to the public and private sectors, plus looking at what the future holds for this five-year-old agency. This month, the Population Statistics unit is discussed.

Fourth in a series

Estimating current and projecting future population of a state and its counties is by no means an exact science. And with a state like Arizona where the population doubled from 1960 to 1980 and is expected to grow nearly 1½ times over the next half-century, the task doesn't get easier.

Ask Linda Strock, manager of Research Administration's Population Statistics unit, also known as Pop Stats, which has been empowered since 1967 to prepare yearly population estimates for the state, counties, and incorporated places; and by executive order since 1977 to project population (up to 50 years) for the state and counties.

Places	1990	1994	2000
Bisbee	8,075	8,075	8,330
Nogales	20,075	22,125	26,150
Winslow	9,125	9,815	10,700

When making projections, the further out you get from a census year, it's like "sitting in a tree and sawing off a branch. You hope you're on the correct end of the limb," says Strock, who needs to inject a little bit of humor into her job from time to time to offset the grind of crunching numbers and setting up formulae to calculate her unit's prognostications.

Actually the task of estimating and projecting population is part trial and error, and in a strange way could be compared to the process of baking a cake (remember the humor).

County	July 1, 1988
Apache	66,300
Maricopa	2,035,500
Yuma	94,500

For example, when Pop Stats estimates the current year's population, it starts with a foundation -- the last decennial census count; then several basic ingredients -- births, deaths, migration (in and out) -- are added; local input, from an advisory committee made up of area government agencies, is also sprinkled in; and finally the cake is topped with the DES Director's approval.

This example, of course, is an oversimplification of the process Pop Stats uses, but it nevertheless points out the different factors -- established data, estimates, and local perspective -- that enter into calculating state and county population figures.

Pop Stats joined Research Administration (RA) in 1987 after its previous home -- the Division of Planning and Policy Development --

(Continued on page 7)

Health-Care Program Reduces Risk for Employee, Public

(Continued from page 4)

coverage for mental health services and organ transplants (except kidney and cornea). These exclusions are not uncommon, however, and are in line with coverage carriers are providing AHCCCS patients, Gesell says.

Although employers using The Health Care Group are not required to contribute to their workers' insurance premiums, company contributions are the norm, Gesell says. About 60 to 70 percent of companies pay some portion of the employee's premium, she says, with a much smaller percentage contributing to an employee's premium for dependents.

Some of the programs (state of Florida, for instance) funded by the Robert Wood Johnson Foundation, however, also subsidize a part of their enrollees' premiums. But AHCCCS does not, which more or less falls in line with the state's pioneer attitude, says Gesell, adding, The Health Care Group "is more of a stand-on-your-own-two-feet program."

While The Health Care Group is currently dependent on funding, its ultimate goal is to become self-sufficient. It will do that, says a confident Gesell, when the program has 5,800 enrollees. At that point, a portion of enrollees' premiums that are held in a special account will be able to cover The Health Care Group's administrative costs.

In the meantime, Gesell is anxiously waiting to hear from the Robert Wood Johnson Foundation on a request for $340,000 in grants for each of the next two years, beginning in October of this year. If accepted, the grants will enable Arizona's program to expand from one to five full-time employees, including a manager. The program's current funding has been stretched out over three years -- instead of one -- by only funding a billing clerk position and Gesell's temporary job.

More information is available on The Health Care Group of Arizona™ by calling 1-800-247-2289 from anywhere in the state .

--Brent Fine
Arizona LMI Newsletter Editor

[1] U.S. Senate Subcommittee on Labor and Human Resources, Nov. 4, 1987.

[2] Mail survey conducted in 1986 by The Health Care Group of Arizona.

[3] Survey conducted in 1986 by the consulting group Mercer-Meidinger-Hansen.

[4] W. David Helms, PhD, executive director, Alpha Center, Washington D.C.; director, "Health Care for the Uninsured" program, Robert Wood Johnson Foundation.

[5] "Comparative Report on Hospital Charges," November 1988, Arizona Dept. of Health Services.

[6] Information cited from Arizona Hospital Association in "AHCCCS Overview," March 1988, p. 16.

[7] The Health Care Group of Arizona.

[8] "AHCCCS Overview," Appendix A, March 1988. Individuals can also qualify for AHCCCS through other federal and state programs.

[9] "AHCCCS Overview," March 1988, p. 17.

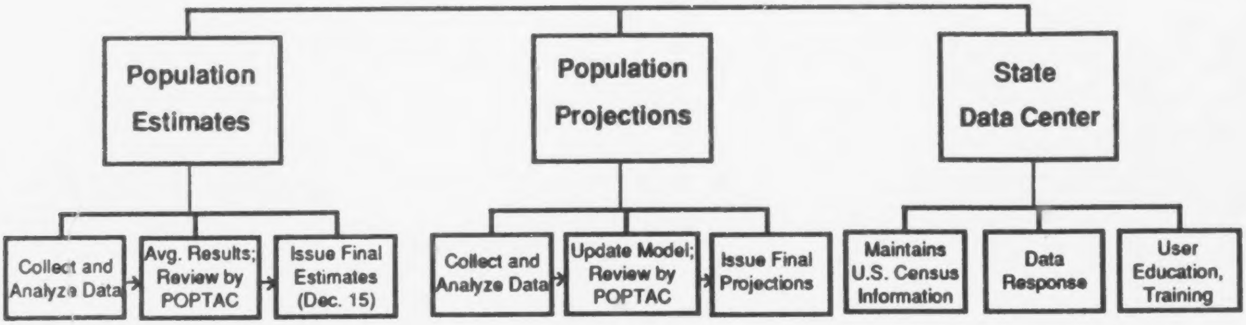
Population Estimates
Population Projections
State Data Center
Collect and Analyze Data
Avg. Results; Review by POPTAC
Issue Final Estimates (Dec. 15)
Collect and Analyze Data
Update Model; Review by POPTAC
Issue Final Projections
Maintains U.S. Census Information
Data Response
User Education, Training

Figure 1. Functions of Research Administration, Population Statistics Unit

RA Unit Uses Variety of Tools to Estimate, Project Population

(Continued from page 5)

was eliminated, and because of its natural tie-in with research and employment data.

The six-member unit, RA's second smallest, has three primary functions (Figure 1), all related to the collection and dissemination of population data: (1) providing annual population estimates (as of July 1) of the state, counties, and incorporated places; (2) providing annual population projections (up to 50 years ahead) for the state and counties; and (3) administering the State Data Center, which is responsible for the distribution of census data, and official population estimates and projections.

To estimate Arizona's current year population, the Pop Stats unit starts with the last decennial census (i.e., 1980), then updates the figure by plugging various symptomatic data -- vital statistics, housing units, income tax returns, net migration -- into several formulae. To ensure accuracy and reduce bias, David Lillie, a planner in charge of the state's estimates, uses three estimating methods and averages the results. (In a perfect world, population estimates would be updated by using the formula, "births - deaths + inmigration - outmigration," but those data are not easily obtained and often arrive too late for current year estimates.)

"Migration is always the tricky part -- there's no data series (to refer to)," Strock says. To determine migration estimates, administrative records -- IRS returns, school enrollment, housing units -- are used "to look for a pattern to develop," Strock says. When the

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(Continued from page 7)

1990 census figures are in, then "we check back to see if the relationships hold," she says.

Projections, which are forecasts of future population (up to 50 years), are unlike estimates in that they "are not based directly on measures of variables that are systematically related to population (i.e., vital statistics)."[1] Instead, projections "are the result of extrapolating past trends in either the population variable itself, population components, or other related variables."[2]

Currently, Ray Gruenfeld, who is in charge of projections, uses two computer models to determine Arizona's totals, which go out to the year 2040. The models start with current estimates, then factor in assumptions about the future of the state's economy, migration patterns, and other variables to arrive at the projections.

After Pop Stats is finished, the Arizona Population Technical Advisory Committee (POPTAC), made up of state agency representatives, university professors, and planners from Councils of Governments (COGs) review the data and issue tentative recommendations, which are then referred to the DES Director for final approval. Final estimates are due by December 15.

Who benefits from these numbers? Estimates and projections are used by a variety of federal, state, county and city agencies -- such as the state's Department of Transportation and Department of Water Resources -- as well as private groups and businesses for long-term and capital planning. Even "support for art museums, health care for indigents and construction of fallout shelters are ... linked in one way or another to population estimates."[3]

The State Data Center, established in 1978 as a joint project with the U.S. Census Bureau, provides direct response to queries on population and related census information, and access to data products, such as printed reports, summary tape files and maps. The data center, managed by Betty Jeffries, is also responsible for providing education and training on available products and guidance in their use.

Estimates and projections are used by a variety of federal, state, county and city agencies ... as well as private groups and businesses for long-term and capital planning.

Although Jeffries, a research analyst, and research assistant Roxanne Best answer many of the 4,000 to 5,000 queries the data center receives each year, everyone from Pop Stats pitches in.

"We're a very small unit. We have to have a little bit of backup for one another," says Strock, who has headed up Pop Stats since December 1983, and prior to that had eight years of experience at the Census Bureau in Washington D.C.

As for "projecting" future changes for her unit, Strock says additional staff will have a high priority.

Following release of the 1990 U.S. census late next year, a heavy volume of calls is expected for data requests. "The phones will be ringing," Strock says. In addition, a consultant has been contracted to determine staffing needs in other areas.

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(A more in-depth look at the Population Statistics unit and general information on population estimates and projections in Arizona are available in the Spring 1988 issue of *Arizona Review*, published by the University of Arizona.)

In the August issue of the Arizona LMI Newsletter, the Research Administration's Data Systems unit will be discussed.

--Brent Fine
--Arizona LMI Newsletter Editor

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[1] "Uses and Abuses of Population Estimation: The Case of Arizona, Arizona Review, Spring 1988, p. 23.

[2] Ibid.

[3] Ibid., p. 25.

The Arizona Labor Force in May

Arizona's unemployment rate fell to 5.0 percent in May as 48,100 additional residents gained employment, and 11,200 dropped from the ranks of the unemployed.

While the magnitude of these labor force changes appear to indicate a sudden improvement in Arizona's economy, the change in nonfarm payroll change does not support that conclusion. Instead, payroll employment shrank by 600 jobs in May.

An explanation for the apparent discrepancy lies in the difference between the residence-based household survey of total employment and unemployment and the job-based business establishment survey of wage and salary employment.

As students leave school at the end of the school year, they are counted among the total employed if they look for work and find a job, work as unpaid family members in their parents' business for 15 or more hours a week, or perform other gainful work (i.e., cutting lawns).

Former students are counted among payroll employed (nonagricultural wage and salary employment) only if they work for a wage or salary -- not as unpaid family or self-employed workers. Much of May's substantial total employment growth appears to be related to these latter two groups.

The surprisingly large loss of unemployed is an indication that workers are leaving the area if their job search has been unsuccessful. In other words, Arizona is experiencing net outmigration of people looking for work.

Nevertheless, the extreme directional changes in this month's total employment and unemployment series suggest the possibility that May's labor force estimates may be overstated, and that subsequent monthly estimates will bring the series more in line with previous months' experience.

Total Arizona nonagricultural wage and salary employment took a dip for the first time since the usual seasonal December-to-January dropoff. Although there has not been a decline in May payroll employment since the recession year of 1982, it is, of course, too soon from one month's data to know if this is signaling a downturn for the economy as a whole.

The loss of payroll employment can be attributed to Manufacturing's loss of 500 jobs. The decline was widespread throughout Manufacturing, but the heaviest losses were among

(Continued on page 14)

Arizona Labor Force and Employment

May 1989 (in thousands)

	Arizona				
				Amount Change	
	May* 1989	Apr. 1989	May 1988	Apr.- May-	1988- 1989
TOTAL CIVILIAN LABOR FORCE**	1742.0	1705.1	1659.4	+36.9	+82.6
Total Unemployment	80.7	91.9	109.0	-11.2	-28.3
Rate	4.6	5.4	6.6	----	----
Rate (Sea. Adj.)***	5.0	5.8	7.1	----	----
Total Employment	1661.3	1613.2	1550.4	+48.1	+110.9
NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK					
TOTAL WAGE AND SALARY	1442.5	1443.1	1419.6	-0.6	+22.9
Manufacturing	189.5	190.0	190.0	-0.5	-0.5
Durable Goods	144.8	145.2	146.9	-0.4	-2.1
Stone, Clay, and Glass	7.6	7.6	7.8	+0.0	-0.2
Primary and Fabricated Metals	15.7	15.8	15.5	-0.1	+0.2
Primary Metals	7.5	7.6	7.4	-0.1	+0.1
Fabricated Metals	8.2	8.2	8.1	+0.0	+0.1
Machinery	64.3	64.5	66.5	-0.2	-2.2
Other Durable Goods	57.2	57.3	57.1	-0.1	+0.1
Aircraft and Missiles	25.8	26.3	26.4	-0.5	-0.6
Lumber and Wood Product (Excluding Furniture)	8.4	8.2	8.4	+0.2	+0.0
All Other Durable Goods	23.0	22.8	22.3	+0.2	+0.7
Nondurable Goods	44.7	44.8	43.1	-0.1	+1.6
Food and Kindred Products	9.6	9.5	9.1	+0.1	+0.5
Apparel	4.6	4.7	4.5	-0.1	+0.1
Printing and Publishing	17.0	17.0	16.8	+0.0	+0.2
All Other Nondurable Goods	13.5	13.6	12.7	-0.1	+0.8
Mining and Quarrying	12.1	12.0	12.0	+0.1	+0.1
Copper Mining	9.1	9.0	8.9	+0.1	+0.2
Other Mining and Quarrying	3.0	3.0	3.1	+0.0	-0.1
Construction	90.1	89.2	93.5	+0.9	-3.4
Trans., Communications, & Public Utilities	72.2	72.6	72.4	-0.4	-0.2
Transportation	37.1	36.8	36.5	+0.3	+0.6
Communications and Public Utilities	35.1	35.8	35.9	-0.7	-0.8
Trade	360.3	360.0	346.7	+0.3	+13.6
Wholesale Trade	69.7	69.7	68.1	+0.0	+1.6
Retail Trade	290.6	290.3	278.6	+0.3	+12.0
General Merchandise and Apparel	45.2	44.7	42.4	+0.5	+2.8
Food Stores	48.2	48.4	46.1	-0.2	+2.1
Automotive and Service Stations	35.7	35.4	33.6	+0.3	+2.1
Eating and Drinking Places	101.6	101.9	98.3	-0.3	+3.3
OOther Retail Trade	59.9	59.9	58.2	+0.0	+1.7
Finance, Insurance, and Real Estate	92.2	92.1	94.0	+0.1	-1.8
Services and Miscellaneous	370.5	371.9	362.3	-1.4	+8.2
Hotels and Other Lodging Places	43.2	43.5	40.4	-0.3	+2.8
Business Services	77.4	77.4	78.6	+0.0	-1.2
Health Services	92.2	92.5	90.9	-0.3	+1.3
Other Services	157.7	158.5	152.4	-0.8	+5.3
Government	255.6	255.3	248.7	+0.3	+6.9
Federal	44.4	43.9	43.5	+0.5	+0.9
State and Local	211.2	211.4	205.2	-0.2	+6.0
School	119.9	120.9	119.2	-1.0	+0.7

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

May 1989 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
May* 1989	Apr. 1989	May 1988	Apr.- May	1988- 1989	May* 1989	Apr. 1989	May 1988	Apr.- May.	1988- 1989
1079.6	1056.1	1033.0	+23.5	+46.6	330.3	323.5	313.6	+6.8	+16.7
40.4	46.7	54.2	-6.3	-13.8	12.9	15.0	16.9	-2.1	-4.0
3.7	4.4	5.2	---	---	3.9	4.6	5.4	---	---
4.0	4.7	5.6	---	---	4.1	4.8	5.9	---	---
1039.2	1009.4	978.8	+29.8	+60.4	317.4	308.5	296.7	+8.9	+20.7
NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK									
946.5	947.1	937.1	-0.6	+9.4	252.7	253.1	248.4	-0.4	+4.3
138.9	139.0	138.7	-0.1	+0.2	29.0	29.5	30.4	-0.5	-1.4
107.6	107.6	108.1	+0.0	-0.5	23.1	23.6	24.7	-0.5	-1.6
4.9	4.9	5.1	+0.0	-0.2					
10.4	10.5	10.3	-0.1	+0.1					
52.2	52.0	53.2	+0.2	-1.0					
40.1	40.2	39.5	-0.1	+0.6					
31.3	31.4	30.6	-0.1	+0.7	5.9	5.9	5.7	+0.0	+0.2
6.2	6.2	6.0	+0.0	+0.2					
3.5	3.5	3.5	+0.0	+0.0					
12.0	12.0	11.9	+0.0	+0.1					
9.6	9.7	9.2	-0.1	+0.4					
0.8	0.8	0.7	+0.0	+0.1	2.0	2.0	1.8	+0.0	+0.2
60.7	60.4	64.5	+0.3	-3.8	16.8	16.4	17.0	+0.4	-0.2
50.4	50.6	50.2	-0.2	+0.2	9.3	9.1	9.1	+0.2	+0.2
27.1	27.1	26.5	+0.0	+0.6	4.8	4.6	4.7	+0.2	+0.1
23.3	23.5	23.7	-0.2	-0.4	4.5	4.5	4.4	+0.0	+0.1
243.6	243.5	235.5	+0.1	+8.1	58.3	58.1	56.5	+0.2	+1.8
56.1	55.7	54.7	+0.4	+1.4	7.0	7.0	6.9	+0.0	+0.1
187.5	187.8	180.8	-0.3	+6.7	51.3	51.1	49.6	+0.2	+1.7
28.4	28.3	27.3	+0.1	+1.1	7.7	7.4	7.2	+0.3	+0.5
31.2	31.4	29.7	-0.2	+1.5	8.0	8.0	8.0	+0.0	+0.0
22.9	22.7	21.2	+0.2	+1.7	5.5	5.5	5.5	+0.0	+0.0
64.9	65.1	63.1	-0.2	+1.8	18.6	18.8	18.1	-0.2	+0.5
40.1	40.3	39.5	-0.2	+0.6	11.5	11.4	10.8	+0.1	+0.7
73.6	73.4	74.7	+0.2	-1.1	11.6	11.8	12.4	-0.2	-0.8
248.3	249.7	244.8	-1.4	+3.5	69.9	70.4	67.4	-0.5	+2.5
25.5	26.1	23.3	-0.6	+2.2	7.0	7.1	6.8	-0.1	+0.2
60.6	60.5	62.4	+0.1	-1.8	11.5	11.6	11.3	-0.1	+0.2
59.7	59.9	59.5	-0.2	+0.2	20.0	20.1	19.4	-0.1	+0.6
102.5	103.2	99.6	-0.7	+2.9	31.4	31.6	29.9	-0.2	+1.5
130.2	129.7	128.0	+0.5	+2.2	55.8	55.8	53.8	+0.0	+2.0

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	May* 1989	Apr. 1989	May.* 1988	May* 1989	Apr. 1989	May 1988	May* 1989	Apr. 1989	May 1988
Manufacturing	402.52	403.27	404.48	40.7	40.9	41.4	9.89	9.86	9.77
Aircraft & Missiles	591.91	604.12	INA	43.3	44.0	INA	13.67	13.73	INA
Food & Kindred Prod.	341.74	340.09	343.01	40.3	40.2	39.7	8.48	8.46	8.64
Primary Metals	513.38	499.87	488.43	39.1	38.6	39.2	13.13	12.95	12.46
Machinery	399.27	393.20	407.11	40.7	40.0	42.1	9.81	9.83	9.67
Copper Mining	558.95	544.00	510.06	43.6	42.7	41.3	12.82	12.74	12.35
Construction	423.45	430.52	437.47	36.1	36.3	37.2	11.73	11.86	11.76
Utilities	681.80	695.97	614.01	40.9	41.6	42.2	16.67	16.73	14.55
Retail Trade**	251.84	254.64	245.02	33.4	33.2	32.8	7.54	7.67	7.47
Wholesale Trade	371.32	372.27	394.71	38.8	38.9	40.4	9.57	9.57	9.77

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	May* 1989	Apr. 1989	May 1988	May* 1989	Apr. 1989	May 1988	May* 1989	Apr. 1989	May 1988
Manufacturing	421.20	425.58	430.73	40.5	41.0	41.9	10.40	10.38	10.28
Construction	439.83	447.60	459.56	36.5	36.9	37.7	12.05	12.13	12.19
Retail Trade**	265.20	269.62	270.21	34.0	34.0	33.4	7.80	7.93	8.09
Wholesale Trade	387.29	394.21	411.82	39.6	39.5	41.1	9.78	9.98	10.02

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	May* 1989	Apr. 1989	May 1988	May* 1989	Apr. 1989	May 1988	May* 1989	Apr. 1989	May 1988
Manufacturing	364.42	371.33	375.18	38.0	38.6	39.0	9.59	9.62	9.62
Copper Mining	589.81	574.60	559.40	43.4	42.5	42.8	13.59	13.52	13.07
Construction	390.77	397.67	387.32	36.9	37.2	37.1	10.59	10.69	10.44
Utilities	575.09	584.32	571.71	40.7	41.5	41.7	14.13	14.08	13.71

*Preliminary.
**Excludes eating and drinking places.

Note: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
May 1989

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	15,550	36,150	45,425	12,900	9,150	2,950	5,800
Total Unemployment	1,650	1,975	2,525	1,050	600	200	325
Rate	10.6%	5.5%	5.6%	8.1%	6.6%	6.8%	5.6%
Rate (Seas. Adj.)**	13.1%	5.9%	6.7%	9.0%	7.4%	7.6%	6.4%
Total Employment	13,900	34,175	42,900	11,850	8,550	2,750	5,475

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	15,550	25,650	40,425	10,750	5,775	2,800	3,700
Manufacturing	875	1,250	2,950	1,350	200	50	325
Mining & Quarrying	50	125	150	1,300	0	1,550	100
Construction	975	850	1,700	575	225	175	225
T.C.P.U.	1,800	1,500	2,200	375	150	50	50
Trade	1,575	5,925	9,575	2,175	1,525	225	1,225
F.I.R.E.	325	700	950	275	100	25	100
Services & Misc.	4,575	4,825	10,875	2,050	900	150	875
Government	5,375	10,475	12,025	2,650	2,675	575	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	33,575	27,400	40,275	10,725	39,475	52,725
Total Unemployment	1,400	2,175	2,475	850	1,775	10,400
Rate	4.2%	7.9%	6.1%	7.9%	4.5%	19.7%
Rate (Seas. Adj.)**	4.4%	10.1%	6.5%	10.3%	4.8%	15.4%
Total Employment	32,175	25,225	37,800	9,875	37,700	42,325

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	22,850	20,500	31,150	9,925	26,100	27,925
Manufacturing	2,700	2,025	4,175	1,300	2,325	2,100
Mining & Quarrying	175	1,175	3,650	0	875	50
Construction	1,700	950	1,350	350	2,125	1,425
T.C.P.U.	1,150	1,750	925	575	975	1,050
Trade	6,925	4,100	5,600	4000	7,275	8,225
F.I.R.E.	1,000	400	775	275	975	1,025
Services & Misc.	5,400	4,600	4,225	1,625	5,925	6,225
Government	3,800	5,500	10,450	1,800	5,625	7,825

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
May 1989

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,742,007	1,661,305	80,702	4.6%
Apache	15,550	13,903	1,647	10.6
Cochise	36,140	34,167	1,973	5.5
Coconino	45,435	42,899	2,536	5.6
Gila	12,887	11,849	1,038	8.1
Graham	10,168	9,562	606	6.0
Greenlee	2,954	2,748	206	7.0
La Paz	5,778	5,465	313	5.4
Maricopa	1,079,630	1,039,226	40,404	3.7
Mohave	33,570	32,175	1,395	4.2
Navajo	27,418	25,237	2,181	8.0
Pima	330,244	317,361	12,883	3.9
Pinal	40,281	37,800	2,481	6.2
Santa Cruz	10,717	9,870	847	7.9
Yavapai	39,495	37,711	1,784	4.5
Yuma	52,741	42,332	10,409	19.7

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in May

(Continued from page 9)

the high-tech and defense-related components.

Construction, which had lost 13,000 jobs over the previous two years ending in April, added 900 in May. That's still about half the average May growth of the current business cycle expansion, and about equal to May growth of the last two years.

The related Finance, Insurance, and Real Estate (FIRE) industry added a seasonally weak 100 in May. Recent announcements of government takeovers of Phoenix savings and loans signal more employment losses to come in FIRE.

Services, the one industry that has been Arizona's most reliable, floundered in May. Its loss of 1,400 -- although less than half of last May's decline -- was substantially more than seasonally normal since 1982.

Trade, another pillar of the Arizona economy, was neither weak nor strong in May. There was good strength among department stores, but eating and drinking places were down 200 more than seasonally expected.

Government increased a few hundred in May, but in June this industry should bring large seasonal declines as school employment dwindles.

--Ron Simon,
Economic Analysis Manager

LMI Publications -- Hot Off the Press

The following revised publications prepared by the Department of Economic Security (DES), Research Administration, can be ordered by writing to the address on the back of this newsletter or by calling (602) 542-3871. One copy of each publication will be sent at no charge. Multiple copies are available at a nominal charge. DES offices can order directly from DES Supply.

The latest edition of *Job Bank Wages* (PAL-379) includes occupations and respective hourly wages (low, average, and high) that were offered in 1988 through the Department of Economic Security's Job Service. Occupations are listed alphabetically within occupational groups by the geographic area (statewide, county or city) they were offered.

Since many of the applicants using the Job Service were entering the labor force for the first time, *Job Bank Wages* is a valuable source of entry-level wage data. This publication is also one of the few sources of wage data for non-metropolitan areas of the state.

Occupational Employment Forecasts (PAL-363 to PAL-377A) are annual publications that detail the current and expected demand for occupations in Arizona, based on data taken from the Occupational Employment Statistics (OES) survey. The booklets, which are available for each Arizona county and the "state as a whole," include the following data for each occupation listed: employment projections for the years 1989, 1990 and 1994; projected number of job opportunities from 1989 to 1994; and projected job growth (number and percent) from 1989 to 1994.

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported from these sources.

MANUFACTURING - Representatives of government, private industry and education in Arizona have banded together to develop a plan to land a recently formed computer-chip company designed to challenge Japanese control of that industry. Led by Maricopa County Supervisor Tom Freestone, the group will coordinate efforts to land the chip manufacturer -- **U.S. Memories Inc.** -- which is backed by a $1 billion consortium of computer giants, including International Business Machines, Intel Corp., and Digital Equipment Corp. A site for U.S. Memories' plant, which will employ between 2,000 and 5,000 workers, is expected to be selected within the next two months.

Phoenix Newspapers Inc., parent company of *The Arizona Republic* and *The Phoenix Gazette*, has announced plans to build a 250,000-square-foot plant at 19th Avenue and Williams Drive in north Phoenix. Phoenix Newspapers' second satellite plant, the printing facility will employ 400 workers and be in operation within three years. The company's first satellite plant, in Mesa, opened in 1982; a third plant is planned for Tolleson at an undetermined date.

Bull HN Information Systems Inc., a division of Groupe Bull of France, is laying off more than 100 employees at its Chandler manufacturing

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(Continued from page 15)

plant. "Changing product technologies and overall cost reductions" were cited for the cutbacks that affect more than three-fourths of the workers at the computer-board manufacturing facility. The layoffs will not affect Bull's 2,400 employees at its Deer Valley Computer Park in Phoenix.

Ground has been broken for a 250,000-square-foot manufacturing plant in south Tucson for **Weiser Lock Co.** Weiser Lock, which announced earlier this year it was moving its lock-making facility from Huntington Beach, Calif., expects the plant to be completed by January. Weiser Lock is currently filling 30 technical positions and will hire 300 to 400 other workers in the fall.

MINING - **Magma Copper Co.** and a group of 10 unions have agreed on a three-year contract that covers 3,150 workers. The agreement calls for an increase in the base wage -- $1 an hour the first year; 25 cents in the second and third years -- plus additional increases tied to the price of copper. The raises, however, are only in effect as long as the price of copper -- currently around $1.06 a pound -- remains above 95 cents a pound.

CONSTRUCTION - **Recent housing statistics** are showing what employment figures have pointed to for the last two years -- metropolitan areas of the state are doing poorly, while parts of the northern part of Arizona are booming. **Home-building permits** in the Valley were down 29 percent -- 1,385 from 1,964 -- in the first five months of this year compared to the same period last year. **New building starts** in Show Low, however, doubled -- 42 versus 21 -- for the same period.

Two central Phoenix shopping centers are about to undergo major facelifts. A $2 million project for **Uptown Plaza**, located at Central Avenue and Camelback Road, will add 17 new stores and 23,205 square feet of retail space. And a $10 million undertaking at **Town & Country Shopping Center**, 20th Street and Camelback Road, will add a 133-room hotel, 450-care parking garage and 50,000 square feet of retail space.

TRADE - **Ole's Home Centers** will close its 10 Valley stores -- laying off 400 employees -- by September due to decreased revenues, primarily from fierce competition in the home-improvement market. A subsidiary of Builders Emporium of Irvine, Calif., Ole's will keep open its one other Arizona store, in Flagstaff. Two other home-improvement companies, Ray Lumber Co. and Neilson's Building Materials, both of Mesa, filed for bankruptcy protection in 1988. And Phoenix-based O'Malley's has shut down six of its 13 retail stores in Arizona and Texas since last year.

Seven **Denny's** restaurants in metropolitan Phoenix have closed down, but are expected to reopen under new ownership. All of the stores are franchise operations owned by De Dan Inc., which filed for reorganization under Chapter 11 of federal Bankruptcy Code. The closures forced layoffs of 200 employees.

House of Fabrics has opened its 12th store in metropolitan Phoenix, its sixth in the last 12 months. The 12,000-square-foot store at 3202 E. Greenway Road, is in line with the size of retail outlets the Sherman Oaks, Calif., company has been moving to since 1984. Prior to that, House of Fabrics, the nation's largest home-sewing and crafts retailer, primarily operated 4,000-square-foot stores in shopping malls.

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A U.S. bankruptcy court has approved the sale of **Bayless Markets Inc.** to a Seattle-based holding company. **Alistar Capital Corp.** plans to purchase and remodel Bayless' 10 stores -- all outside Phoenix -- and retain the former chain's 800 to 900 employees.

More than 850 jobs are expected to be created by the construction of **Peoria Palms**, a 38-acre retail shopping center at Bell Road and 75th Avenue. Developed by Arizona Building and Development Inc. of Chandler, the center will include a K Mart and Fry's Supermarket, plus seven other major tenants.

FINANCE, INSURANCE and REAL ESTATE - **Estes Development Co.** has sold its new Arizona Design Centre at 37th Street and University Drive in Phoenix to Birtcher of Laguna Nigel, Calif. The 138,000-square-foot center, which will employ 90 people, will have 30 showrooms filled with home furnishings that will be offered at wholesale prices to interior designers and architects.

Phoenix has become the home of a regional service center for Miami-based **John Alden Life Insurance Co.**, one of the largest health and life insurers in the country. About 70 people are employed by John Alden -- 40 of which were hired locally -- and will be involved in writing policies and servicing claims. John Alden, which expects to add 30 to 50 jobs in the next two years, specializes in insurance for companies that employ 25 and fewer workers.

TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES - A regional airline based in Montana hopes the sky's the limit when it begins service this fall at Scottsdale Municipal Airport. **Big Sky Airlines**, which serves 17 cities in three states, plans to operate two 19-seat aircraft on flights between Scottsdale and Tucson, and eventually expand service to southern California. Big Sky, following the lead of Stateswest Airlines in flying out of Scottsdale, filed for bankruptcy protection in March due to a poor regional economy, an airline official said.

Dallas-based **Southwest Airlines** is hiring an additional 350 employees to its Phoenix Sky Harbor Airport operation. The new jobs, which are in addition to 212 positions added since the first of the year, will be in reservations, ground operations and flight personnel. Southwest, with 101 daily departures from Sky Harbor, will have 1,771 employees in Phoenix by the end of 1989 with a $70 million payroll.

SERVICES AND MISCELLANEOUS - One of the largest U.S. telemarketers has increased its Valley sales staff from under 20 to 55, and plans to move its corporate headquarters from New Jersey to Scottsdale. **Response Communications**, which appeared ready to leave the Valley six months ago, has done a complete reversal and since has installed more than $1 million of computer-driven telecommunications equipment at its office at 64th Street and Thomas Road, and expects to have a work force of 200 within the next 12 months.

Occupancy rates of Arizona's hotels are expected to show slight improvement in 1989, reports a study by the accounting firm of Laventhol & Horwath, and Valley National Bank. While tourism in the state has been increasing steadily the past few years, occupancy rates have been dropping -- 59.8 percent in Phoenix in '88 versus 70.8 percent in '84 -- due to the dramatic number of new hotels. Metropolitan Phoenix' occupancy rate is predicted to rise to 62 percent; rates in Tucson are expected to remain at 64 percent; and Flagstaff's rate is forecast to rise

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to 73 percent this year from 71.4 percent in '88.

Ramada Inc. of Phoenix, which recently sold its worldwide hotel operations, has changed its name to **Aztar Corp.** The name change, however, will not affect the number of employees (50) at the corporate headquarters of Aztar, which retained ownership of its gaming properties in Nevada and Atlantic City. New World Development Corp. of Hong Kong, which bought Ramada's hotel group, has not indicated how its plans will affect the hotel chain's 300 administrative workers and 350 people employed at a reservations center, both in Phoenix.

At least three potential buyers have expressed interest in purchasing the **Arizona Biltmore**, which currently is owned by Lepercq/DBL Biltmore Associates of New York. Last fall a deal was struck with Stouffer Hotel Co. to purchase 60 percent of the famous resort property on 24th Street in central Phoenix, but the agreement fell through when a price for the hotel could not be reached.

Work is under way on a 24-bed substance-abuse and mental-health facility in Show Low for Navajo and Apache county residents. The **Community Counseling Center**, which has operated outpatient services in Holbrook and Winslow since 1966, is expected to open its building for around-the-clock care August 1.

Increasing competition in the convenience-store industry and high debt has forced Phoenix-based **Circle K Corp.** to streamline its operations. Circle K, which added 1,000 stores to the company in 1988, saw its net income drop 75 percent in the first quarter of 1989. The convenience-store chain, which is expected to sell some of its 4,685 stores in 33 states, laid off 250 administrative employees last year and probably will make further cuts in the near future.

GENERAL - Arizona set another state record for the number of **bankruptcies** filed with federal courts. In June, 1,487 bankruptcy cases were filed, topping by 67 the record for one month, set in May. The downturn in the state's economy -- primarily caused by a slack real estate and construction market -- and high credit-card debt are blamed for the large number of bankruptcy filings.

The Greater Phoenix Partnership, a year-old economic-development organization representing six Valley cities, has come up with a plan to lure business to the Phoenix area. Work on the plan, which came up with ways to fund a $1.7 million budget and appoint a board of directors, began in earnest six months ago after negative articles about the Valley appeared in several national publications. Meanwhile, the **Western Gateway Team**, an organization promoting west Valley economic development, has temporarily shut down due to financial problems and has filed for bankruptcy protection. A sluggish Valley economy, and problems of American Continental Corp., a major contributor to Western Gateway, were cited for the closure.

A **study by U.S. West Corp.** says business will boom in Arizona and other western states from now through 1993, and will be fueled by small businesses (fewer than 100 employees). An expansion in the West far outpacing the rest of the country will be due to high-tech manufacturing, general services, and business and professional services, the report concluded.

GOVERNMENT -- The city of Phoenix is studying eight sites in the Maryvale area for a $13.4 million, 18,000-seat amphitheater, spurned by a northeast Phoenix community in March

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because of noise and traffic concerns. At that point, citizens groups in the west Valley community began lobbying Phoenix officials, and later presented 2,500 signatures supporting the amphitheater project.

The Pima County Board of Supervisors has approved a $19 million project to develop **county office space** in the former Lawyers Title Building in downtown Tucson. The project also calls for erecting a parking garage and a YMCA branch.

VOCATIONAL EDUCATION -- Construction is expected to be completed in August on the **Maricopa Skill Center**, 1245 E. Buckeye Road. The center, which has been located at 4118 E. Wood St., features training in secretarial, carpentry, electrical, meat-cutting and automotive-repair skills. Besides adding 10,000 square feet of useable space, the $5.5 million facility is important because it is located in the Nuestro Barrio (between 7th and 14th streets, and Interstate 10 and the Southern Pacific Railroad tracks), an area of 5,600 people -- primarily minorities -- with an unemployment rate of more than 30 percent. One of the goals of the center is to help prepare individuals for about 14,000 jobs that will be created in the next decade at the nearby Sky Harbor Center, a multimillion-dollar commerce and industrial park west of Sky Harbor International Airport.

Beg Your Pardon

In the June Arizona LMI Newsletter, the telephone number to access a modem on the Arizona Automated Vendor Inquiry System (AAVIS) in Tucson was not given. The number, (602) 882-5502, is not toll free.

In the June Arizona LMI Newsletter, a story on summer jobs for youth included a partial list of DES Job Service offices. Information on the nearest Job Service office is available by calling 542-3608 in Phoenix.

BLS: Record Percentage of High School Graduates Enrolled in College

Approximately 2.7 million youth received high school diplomas in 1988, and a record 59 percent of those went on to enroll in college, the U.S. Bureau of Labor Statistics reports. Nearly half of those enrolled were also in the labor force.

These statistics, along with other information on students, were compiled from the Current Population Survey, a monthly examination of 56,000 households which provides data on the labor force, employment and unemployment. Among other data on students the survey found were:

- The percentage of high school graduates attending college has gone up nearly 10 points in the last decade. The enrollment of black graduates (45 percent), however, has stayed far below the rate of whites (61 percent) and Hispanics (57 percent).
- Of the 1.6 million college freshmen, 47 percent were in the labor force in October.
- About 85 percent of the 1988 high school class (1.1 million) who did not attend college were in the labor force. The unemployment rate for this group was 15.1 percent, the lowest level in 10 years.
- Approximately 100,000 graduates not in college were enrolled in at least one vocational education class.
- Of the 550,000 students who dropped out of high school between October 1987 and October 1988, 59 percent joined the labor force, but 26.7 percent of those were unemployed.

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XIII No. 8
August 1989

Unemployment Rate

Seasonally Adjusted
June*

ARIZONA	-	5.2%
Maricopa County	-	4.3%
Pima County	-	4.6%
UNITED STATES	-	5.3%

Consumer Price Index

U.S. - July 1989
Base = 1982-84

Wage Earner Clerical Worker	- 122.8
% Chg. Year Ago	- 5.2
All Urban	- 124.1
% Chg. Year Ago	- 5.2

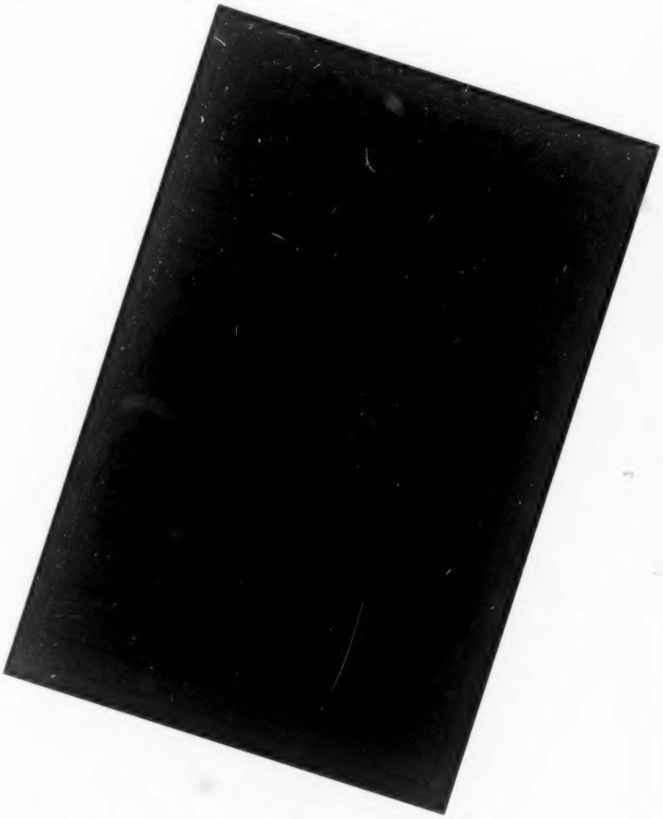
Phoenix - 2nd Qtr 1989
Base = 1982-84

All Urban	- 125.9
% Chg. Year Ago	- 5.0

Tucson - 2nd Qtr 1989
Base = 1982-84

All Urban	- 125.3
% Chg. Year Ago	- 4.6

* Preliminary



Keeping Tabs on Arizona's Work Force, P. 2

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Data Systems Surveys State's Vital Signs

RA's Largest Unit Operates Labor Information Programs

In an effort to give readers a better understanding of the functions of DES, Research Administration, for the last several months the Arizona LMI Newsletter has been taking an in-depth look at the data-gathering and analysis group that measures the state's economic pulse. Articles have been focusing on the four units that make up Research Administration -- Economic Analysis, Technical Support, Population Statistics, and Data Systems -- plus looking at what the future holds for this five-year-old administration. In this month's final installment, the Data Systems unit is discussed.

Fifth in a series

CES, OES, LAUS and ES-202 are terms that are not as familiar to the general public, as say, IBM, AT&T, IRS or FBI. But to economists and followers of employment statistics, the first group of abbreviations hold significant meaning.

In some cases dating back to the days of FDR (those initials should be familiar) and the New Deal, these terms represent the core of labor market information (LMI) programs developed over the years by the U.S. Bureau of Labor and its successor, the Bureau of Labor Statistics (BLS), to measure national, state, and local-area economic and social trends.

Labor Market Information Terms

CES	-	Current Employment Statistics
LAUS	-	Local Area Employment Statistics
ES-202	-	Employment and Wages Program
OES	-	Occupational Employment Statistics
CPS	-	Current Population Survey
Benchmark	-	Adjustment of estimates to reflect actual data
UI Tax Files	-	Unemployment Insurance reports filed by employers
Disclosure Rules	-	Restrictions put on release of data (see Fig. 3)

Figure 1.

These federal-state cooperative programs are used by BLS and state employment security agencies (i.e., the Arizona Department of Economic Security) to track: 1) employment, hours, and earnings of workers at nonagricultural establishments; 2) employment by occupation; 3) employment and wages covered by unemployment insurance (UI) programs; and 4) state and substate unemployment rates.

Data Systems, Research Administration's largest unit, is an umbrella group that is responsible for operating the LMI programs in Arizona, and is divided into three sections along the lines of each program (Figure 2). Prior to Research Administration's (and Data Systems') creation in 1984, most of the LMI programs were part of the DES Employment and Training Administration. The lone exception was the Employment and Wages (ES-202) program, which was brought over from the state's Unemployment Insurance Administration.

(Continued on page 3)

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SITE CODE 733A
P.O. BOX 6123
PHOENIX, ARIZONA 85005-6123
(602) 542-3871

Brent Fine, Editor
Linda Van Calcar, Word Processor

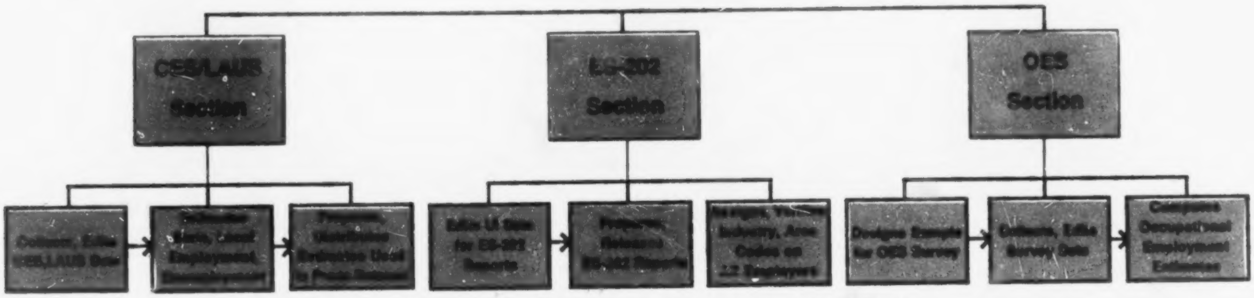

CES/LAUS Section
ES-202 Section
OES Section
Collects, Edits CES/LAUS Data
Edits UI Data for ES-202 Reports
Prepares, Releases ES-202 Reports
Designs Sample for OES Survey
Collects, Edits Survey Data
Computes Occupational Employment Estimates

Figure 2. Functions of Research Administration, Data Systems

(Continued from page 2)

As Data Systems' name indicates, the unit is heavily oriented to data collection, with all of its 19-member staff being either research analysts or statistical clerks. This can have its advantages -- and was a primary reason for creating Data Systems -- in that it's easier to allocate resources.

One area where having overlapping skills has helped is in data verification. Although the LMI programs are primarily independent of each other and assigned a unique task, the programs do rely on each other to verify (benchmark) their data totals.

"There's a lot of commonalty among the programs. The base for the CES and OES programs comes from the ES-202 program," says Data Systems Manager Sue Smith, who has overseen the unit since its inception and been involved with DES employment programs for 21 years.

Another common thread that runs through Data Systems' programs is strict confidentiality rules. Because of the sensitive nature of companies' employment data -- and the fact that most of the LMI programs are voluntary -- BLS has set up rules that preclude the disclosure of specific company information (Figure 3).

Despite the fact LMI programs are primarily voluntary, Smith is quite proud of the fact that Data Systems has one of the better records among states in collecting data -- an 85 to 95 percent response rate, depending on the report.

"We work hard at it. We take extra time to telephone employers ... or help them complete a report," says Smith, adding that cooperation among the programs is also important. "All of the units become eyes and ears for the others' programs. They do have to help each other and share information back and forth."

CES/LAUS Section

The CES (Current Employment Statistics) and LAUS (Local Area Unemployment Statistics) programs, which develop monthly employment and unemployment data on a state and substate level, are run by one section of Data Systems. Two of the oldest LMI programs, CES and LAUS data are published each month in the *Arizona LMI Newsletter (see pages 10-14)*.

CES, which became a fully integrated state-federal cooperative program in

(Continued on page 4)

(Continued from page 3)

1949 and has roots to the early 1900s, is a monthly estimate -- by industry -- of employment, hours and earnings of all nonagricultural employees. Among its data series -- some of which are seasonally adjusted -- are: employment data on all employees, women workers, and production or nonsupervisory workers; and average weekly hours, average weekly overtime hours, and average hourly and weekly earnings. (Note: Some of these data are only published on a national basis.)

Despite the fact the CES program has been around 40 years, its value has not diminished, says Vic Conti, CES/LAUS Section supervisor, who has worked with these two LMI programs and the state since 1973.

"To judge the economic state of an area, you have to look at CES as a prime component -- it has bearing on other indices," Conti says, adding that CES is the largest monthly survey program in the world with data from 330,000 U.S. establishments (4,000 in Arizona).

Disclosure Rules

CES and ES-202 Data

Data cannot be released without written consent if one of the following are true:

1) Fewer than three companies in the industry.
2) One company has 80 percent or more of the industry's employment.

OES Data

Data cannot be released without written consent if one of the following are true:

1) Fewer than three companies in the industry.
2) One company has 50 percent or more of the industry's employment.
3) Two companies have 75 percent or more of an occupation's employment.

Figure 3.

Another reason for CES' importance, Conti says, is it "gives individual industry breakdowns that show patterns of strength and weakness." In turn, knowing the status of individual industries can help to forecast future trends, he says, because "to look at the evolution of an economic cycle, you know certain industries will lead others out of recessions."

In Arizona, the CES survey measures data from four areas -- the Phoenix and Tucson Metropolitan Statistical Areas (Maricopa and Pima counties), and northern and southern counties (excluding Pima and Maricopa counties). CES data are further reduced, or broken out, into nine major industry categories (e.g., manufacturing), and in the case of the state and major metropolitan areas, are again fragmentized to show specific industry sectors (e.g., primary metals manufacturing).

Data for the CES survey is collected each month from a variety of different-sized companies -- as determined by BLS -- in all major industry groups. These companies are asked to fill out BLS survey form (790), which includes payroll information on employees who worked during the pay period that included the 12th of the month, and mail it to the CES section.

The section's three clerical staff -- Supervisor Charlene Markstrom, Doris Llewellyn and Joan Woods -- are then responsible for "the front-end work" of the survey, Conti says -- editing and inputting monthly data, breaking out the county reports, then distributing the resulting data (to the public and BLS), and maintaining reports.

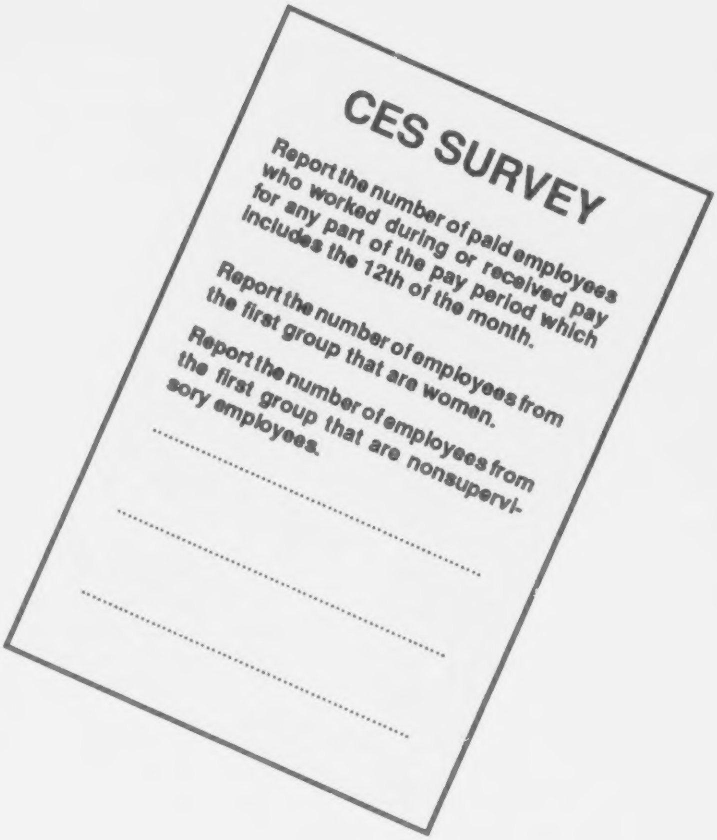
On the back-end then are research analysts Mark Hope, Leonard Heinrich and Bert Cisneros, who are responsible for interpreting the sample data and making employment estimates. The analysts weigh the data against seasonal growth, historical data, and second sources (newspaper, magazine articles) -- to come up with their monthly evaluations.

(Continued on page 5)

(Continued from page 4)

In March of each year, the previous year's CES survey estimates are checked for accuracy through a process called benchmarking. CES data are compared against quarterly UI reports (see ES-202 Section) and other sources, then adjusted accordingly.

The LAUS program had its beginning during and after World War II as a way to track labor surplus areas. But it wasn't until 1972 that BLS was assigned the responsibility of developing a method for states to estimate data on their labor force, employment and unemployment, as a way to help government in its planning and budgeting, and to determine the eligibility of an area for benefits in federal assistance programs.



CES SURVEY

Report the number of paid employees who worked during or received pay for any part of the pay period which includes the 12th of the month.

Report the number of employees from the first group that are women.

Report the number of employees from the first group that are nonsupervisory employees.

Since 1973, BLS has aided less-populated states (now 39), including Arizona, in estimating state and county employment and unemployment data.

(Unemployment rates for the 11 most populous states are determined through the monthly Current Population Survey (CPS) -- conducted by the U.S. Census Bureau -- which samples 70,000 scientifically selected households across the country.)

The LAUS program provides estimates on total employment and unemployment, as well as the unemployment rate at the state, county and city level. Its employment and unemployment totals, however, differ from the CES survey, in that its estimates are by place of residence, while CES estimates are by place of work.

So, for example, someone living in Bullhead City and working in Laughlin, Nev., would be included in the state's LAUS estimates because they live in Arizona, but would not be included in the state's CES estimates. The reverse would be true when Nevada estimates CES and LAUS data.

LAUS data are estimated using a variable-coefficient regression method, which uses two estimating models (one for employment and another for unemployment) that automatically adjust to structural changes in each state's economy. Some of the variables that go into determining the monthly estimates are data from the

(Continued on page 6)

(Continued from page 5)

CES and CPS surveys, unemployment insurance claims, agricultural workers, population, labor force entrance rates, and seasonal variables.

Prior to this year, estimates for the less-populated (nondirect-use) states were derived from the "Handbook" method, a building-block approach that was heavily weighted by UI data. But as the percentage of unemployed who collect unemployment insurance declined, the Handbook method became less reliable and was superseded at the state level. (See "BLS Revises Method for Estimating Employment, Unemployment Rates," *Arizona Labor Market Information Newsletter*, February 1989).

> *To economic forecasters and government agencies, ES-202 is a veritable supermarket of information that "has broad economic significance in evaluating labor trends and major industry developments ... "*
>
> *--BLS Handbook of Methods*

Upon completion of the CES and LAUS surveys each month, results are sent to BLS in Washington. In Arizona, data from these programs are issued to the public on the 13th working day of the month (usually around the 20th calendar day) through press releases and at press conferences in Phoenix (every month) and Tucson (every other month).

ES-202 Section

Created as a reporting system to ensure states were in compliance with the Social Security Act of 1935, the Employment and Wages Program, also known as ES-202, issues quarterly reports -- national, state, and local -- summarizing employment and wage data for workers covered by UI laws.

To economic forecasters and government agencies, ES-202 is a veritable supermarket of information that "has broad economic significance in evaluating labor trends and major industry developments ... ."[1] ES-202 data are used by a variety of BLS programs -- including as mentioned the benchmarking of CES data -- as well as a host of other federal and state agencies, private businesses and the general public.

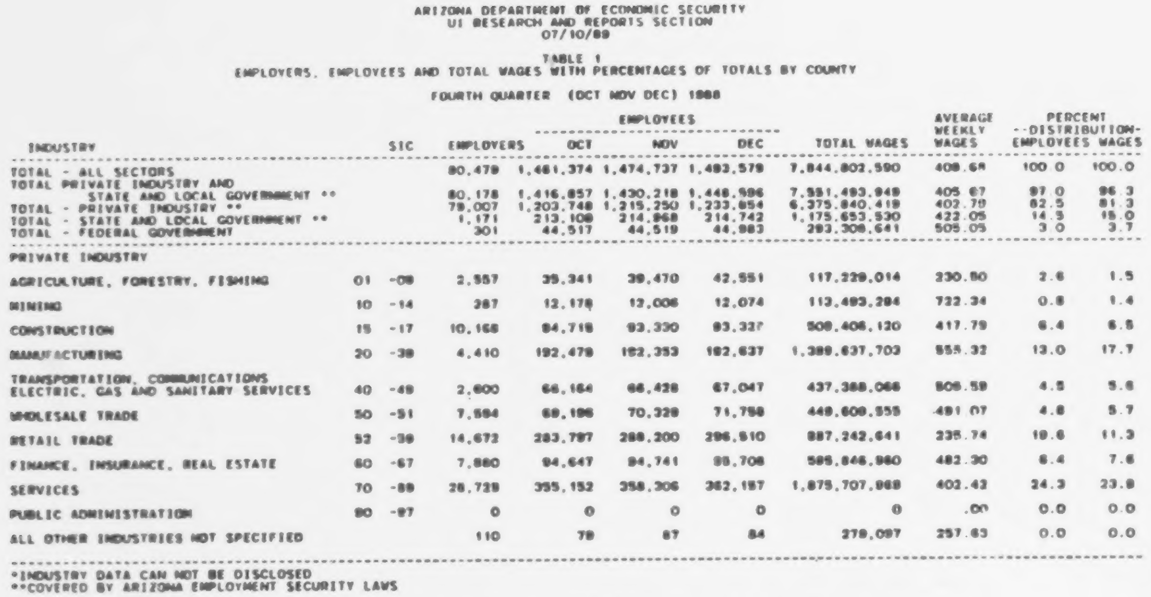
When the ES-202 program started a half-century ago, only private companies with eight or more persons working at least 20 weeks a year were required to file reports. Today, the ES-202 reports accumulate data on about 90 percent of the work force and 94 percent of the wage and salary component of personal income.

In Arizona, that translates into more than 80,000 employers who are required to submit UI tax reports, says ES-202 Section Supervisor Mickey Gamez. And like the CES program, Gamez' five-member staff uses a two-prong approach to prepare the ES-202 report, which includes, on a state and county basis: number of employers and employees, total wages, and percent distribution of wages.

When raw data come in from the state's UI tax files, Gamez and two research and statistical analysts, Dennis Efird and Mike Wade, perform a micro edit -- analyzing the data for fluctuations and seasonal trends, and estimating missing or correcting erroneous employment and wage figures.

Upon completion of the micro edit, a macro edit is conducted. The research and statistical analysts,

(Continued on page 7)



ARIZONA DEPARTMENT OF ECONOMIC SECURITY
UI RESEARCH AND REPORTS SECTION
07/10/89

TABLE 1
EMPLOYERS, EMPLOYEES AND TOTAL WAGES WITH PERCENTAGES OF TOTALS BY COUNTY

FOURTH QUARTER (OCT NOV DEC) 1988

INDUSTRY	SIC	EMPLOYERS	EMPLOYEES OCT	EMPLOYEES NOV	EMPLOYEES DEC	TOTAL WAGES	AVERAGE WEEKLY WAGES	PERCENT DISTRIBUTION EMPLOYEES	PERCENT DISTRIBUTION WAGES
TOTAL - ALL SECTORS		80,479	1,461,374	1,474,737	1,493,579	7,844,802,590	408.68	100.0	100.0
TOTAL PRIVATE INDUSTRY AND STATE AND LOCAL GOVERNMENT **		80,178	1,416,857	1,430,218	1,448,596	7,551,493,949	405.67	97.0	96.3
TOTAL - PRIVATE INDUSTRY **		79,007	1,203,748	1,215,250	1,233,854	6,375,840,419	402.70	82.5	81.3
TOTAL - STATE AND LOCAL GOVERNMENT **		1,171	213,109	214,968	214,742	1,175,653,530	422.05	14.5	15.0
TOTAL - FEDERAL GOVERNMENT		301	44,517	44,519	44,983	293,308,641	505.05	3.0	3.7
PRIVATE INDUSTRY									
AGRICULTURE, FORESTRY, FISHING	01 -09	2,557	35,341	39,470	42,551	117,229,014	230.50	2.6	1.5
MINING	10 -14	287	12,178	12,006	12,074	113,493,294	722.34	0.8	1.4
CONSTRUCTION	15 -17	10,168	94,718	93,330	93,327	508,406,120	417.79	6.4	6.5
MANUFACTURING	20 -39	4,410	182,479	182,353	182,637	1,389,637,703	555.32	13.0	17.7
TRANSPORTATION, COMMUNICATIONS ELECTRIC, GAS AND SANITARY SERVICES	40 -49	2,600	66,164	66,428	67,047	437,388,066	508.59	4.5	5.6
WHOLESALE TRADE	50 -51	7,594	69,196	70,329	71,758	449,600,555	491.07	4.8	5.7
RETAIL TRADE	52 -59	14,672	283,787	288,200	296,510	887,242,641	235.74	19.6	11.3
FINANCE, INSURANCE, REAL ESTATE	60 -67	7,880	94,647	94,741	95,708	595,846,980	482.30	6.4	7.6
SERVICES	70 -89	26,728	355,152	358,306	362,187	1,875,707,869	402.42	24.3	23.9
PUBLIC ADMINISTRATION	90 -97	0	0	0	0	0	.00	0.0	0.0
ALL OTHER INDUSTRIES NOT SPECIFIED		110	79	87	84	279,097	257.63	0.0	0.0

*INDUSTRY DATA CAN NOT BE DISCLOSED
**COVERED BY ARIZONA EMPLOYMENT SECURITY LAWS

Figure 4. Page From ES-202 Quarterly Report

(Continued from page 6)

working at a more detailed industry level (e.g., restaurants), use a computer program to screen data elements for validity and consistency. In addition, comment codes are added to explain fluctuations in data.

Altogether, it takes about two months to complete the editing process. Raw data for each quarter's report are received about four months after the quarter, with the ES-202 Section releasing final reports about six months after the quarter ends. Upon completion of the report, the results are forwarded to BLS in Washington.

While data are being compiled for the ES-202 reports, research and statistical analysts Joan Adair and Benester Reagan are assigning new and verifying current industrial and geographic codes to all employers covered by UI laws in Arizona. Industrial and geographic codes are used by DES for UI program purposes; by DES and BLS in compiling economic statistics for local areas, the state, and nation; and by government and the private sector for economic analysis and planning purposes.

Adair and Reagan are also responsible for an annual refiling survey, which verifies and updates previously assigned codes. And another member of the ES-202 staff, Cindy Traslavina, a research and statistical assistant, takes special data requests and assists with special projects.

All told, the ES-202 Section currently puts out six reports each quarter that are used by other federal and state programs. In addition, ES-202 is responsible for a new report called the Business Establishment List (BEL), which will collect more specific information on local businesses, but also increase the unit's workload by 50 percent, Gamez says.

OES Section

Future workers, guidance counselors, employers and government agencies are some of the beneficiaries of the

(Continued on page 8)

(Continued from page 7)

Occupational Employment Statistics (OES) survey, conducted by the Data Systems' section with the same name.

Started by the U.S. Employment and Training Administration in 1971 and subsequently taken over by BLS, the OES survey estimates occupational totals for nonfarm establishments on a national, state and local-area basis.

The OES survey samples three industrial sectors on a yearly rotating basis: (1) manufacturing and hospitals; (2) nonmanufacturing (finance, insurance and real estate (FIRE); construction; mining; and services); and (3) balance of nonmanufacturing (transportation, communications and public utilities (TCPU); trade; educational services; and government). In Arizona, that equates to about 2,500 manufacturing units, 6,500 nonmanufacturing units, and 6,500 businesses in the "balance of nonmanufacturing" category.

Employment information for the survey is collected on about 750 occupations. An OES list of occupations has been designed for each industry or for each group of industries having a similar occupational structure.

Business establishments, classified by industry according to the 1987 *Standard Industrial Classification* (SIC) *Manual*, are selected for the survey primarily from the ES-202 data base. All businesses with 250 or more employees are automatically included in a sample group.

BLS uses two survey questionnaires -- one for large employers (50 or more employees) and another for small employers (under 50 employees) -- both of which include specific occupational titles and definitions, establishment identification information, and several questions about the nature of the business. Data are collected from respondents primarily by mail, but telephone calls and personal visits are made to many large employers and to those who have difficulty in completing the questionnaires.

The actual OES survey begins in the late spring of each year and takes several months to complete. But the entire process -- from collecting the data to BLS approval of final estimates -- takes more than a year. While the OES unit is currently in the middle of the 1989 survey, it recently completed its final estimates for the '88 study, and preparation is already under way for the '90 survey.

> ***Thanks to a 90 percent response rate from businesses in the state ... it has made doing the OES survey much easier and increased the probability of accuracy.***
>
> ***– Cyprian Eboh***
> ***OES Supervisor***

Including the OES section supervisor, Cyprian Eboh, OES consists of three research and statistical analysts and one clerical support person. Eboh and research and statistical analysts Jeanne Happel and Mark McCain, collect and compile the data, benchmark the data to ES-202 reports, perform technical edits -- using a computer to search for errors and recheck totals -- and make final estimates. Connie Matos, a research and statistical assistant, also helps in data collection.

Thanks to a 90 percent response rate from businesses in the state, Eboh says it has made doing the OES survey much easier and increased the probability of accuracy. "Arizona businesses have been nice to us," Eboh says.

(Continued on page 9)

(Continued from page 8)

For 1989, manufacturing and hospital establishments are being surveyed. But even though there are fewer units to survey than the other two years, it still requires as much time, says Eboh, because typically manufacturing businesses have a greater variety of occupations than other industries.

When OES' final estimates are approved by BLS, the process for Research Administration (RA), however, has not ended. In fact, as far as the public and other interested parties -- students, vocational planners and counselors, and employers -- are concerned, it's just beginning.

RA's Economic Analysis Unit takes the OES data and puts them through a statistical process that yields projections of occupational employment in future years. The results are then shown in two series of RA publications -- the annual *Occupational Employment Forecasts*, which are available on a statewide and county basis; and the *Arizona Occupational Profiles*, which analyze occupations by industry and are published on a three-year rotating basis. Occupational projections are also made available through a statewide data base -- the MICRO OIS -- operated by the Arizona State Occupational Information Coordinating Committee (ASOICC) (*see page 15*).

More information about LMI programs can be found in several BLS publications, which are available free of charge. Contact Research Administration at 542-3871 for specific information.

--Brent Fine
Arizona LMI Newsletter Editor

1. "Chapter 5. Employment and Wages Covered by Unemployment Insurance," BLS Handbook of Methods, p. 39.

The Arizona Labor Force in June

Arizona's unemployment rate for June rose moderately from 5.0 percent to 5.2 percent, after seasonal adjustment partially dampened the effect of an added 18,400 unemployed.

Seasonal adjustment anticipates a normal increase in unemployment from May to June as students end the spring semester and search for summer jobs. The increase of 18,400 unemployed was more than the average monthly increase of 11,800 since 1982. On the other hand, 30,100 fewer residents were employed in June, causing the labor force to shrink by 11,700.

The number of payroll jobs declined as expected in June. A total of 30,900 payroll jobs were lost, of which all but 1,400 were normal seasonal losses in Government, mostly in schools. In Trade and Services, the state's central and southern counties recorded seasonal employment losses (3,400). On the positive side, healthy summer tourism activity in the state's northern counties helped to overcome these losses somewhat by adding about 1,400 jobs.

In Construction, some encouraging signs were noted, with 600 jobs added in June, on top of 900 added in May. Most of that growth (350) came from the state's northern counties.

Manufacturing employment held steady at its May level of 189,600. However, the machinery sector, which contains many of the state's electronics firms, saw employment fall by 300 to 64,100. A weak book-to-bill ratio for the semiconductor industry and a preliminary high

(Continued on page 14)

Arizona Labor Force and Employment

June 1989 (in thousands)

BEST AVAIL

	Arizona				
				Amount Change	
	June* 1989	May 1989	June 1988	May-June	1988-1989
TOTAL CIVILIAN LABOR FORCE**	1729.0	1740.7	1666.8	-11.7	+62.2
Total Unemployment	98.6	80.2	118.0	+18.4	-19.4
Rate	5.7	4.6	7.1	----	----
Rate (Sea. Adj.)***	5.2	5.0	6.4	----	----
Total Employment	1630.4	1660.5	1548.8	-30.1	+81.6
NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK					
TOTAL WAGE AND SALARY	1409.8	1440.7	1391.2	-30.9	+18.6
Manufacturing	189.6	189.6	191.0	+0.0	-1.4
Durable Goods	144.7	145.0	147.6	-0.3	-2.9
Stone, Clay, and Glass	7.6	7.6	7.8	+0.0	-0.2
Primary and Fabricated Metals	15.7	15.8	15.5	-0.1	+0.2
Primary Metals	7.5	7.5	7.4	+0.0	+0.1
Fabricated Metals	8.2	8.3	8.1	-0.1	+0.1
Machinery	64.1	64.4	66.8	-0.3	-2.7
Other Durable Goods	57.3	57.2	57.5	+0.1	-0.2
Aircraft and Missiles	25.5	25.8	26.4	-0.3	-0.9
Lumber and Wood Product (Excluding Furniture)	8.7	8.4	8.4	+0.3	+0.3
All Other Durable Goods	23.1	23.0	22.7	+0.1	+0.4
Nondurable Goods	44.9	44.6	43.4	+0.3	+1.5
Food and Kindred Products	9.7	9.6	9.3	+0.1	+0.4
Apparel	4.6	4.6	4.5	+0.0	+0.1
Printing and Publishing	16.9	16.9	16.7	+0.0	+0.2
All Other Nondurable Goods	13.7	13.5	12.9	+0.2	+0.8
Mining and Quarrying	12.1	12.0	12.1	+0.1	+0.0
Copper Mining	9.1	9.0	9.0	+0.1	+0.1
Other Mining and Quarrying	3.0	3.0	3.1	+0.0	-0.1
Construction	90.7	90.1	94.9	+0.6	-4.2
Trans., Communications, & Public Utilities	72.8	72.6	72.3	+0.2	+0.5
Transportation	37.8	37.5	36.5	+0.3	+1.3
Communications and Public Utilities	35.0	35.1	35.8	-0.1	-0.8
Trade	359.1	360.0	344.9	-0.9	+14.2
Wholesale Trade	69.8	69.6	67.7	+0.2	+2.1
Retail Trade	289.3	290.4	277.2	-1.1	+12.1
General Merchandise and Apparel	44.7	45.0	42.0	-0.3	+2.7
Food Stores	48.1	48.2	46.1	-0.1	+2.0
Automotive and Service Stations	36.0	35.7	34.1	+0.3	+1.9
Eating and Drinking Places	100.6	101.6	97.2	-1.0	+3.4
Other Retail Trade	59.9	59.9	57.8	+0.0	+2.1
Finance, Insurance, and Real Estate	92.0	92.3	93.8	-0.3	-1.8
Services and Miscellaneous	367.7	368.8	360.9	-1.1	+6.8
Hotels and Other Lodging Places	42.3	43.2	40.0	-0.9	+2.3
Business Services	76.7	76.6	77.9	+0.1	-1.2
Health Services	92.3	92.3	91.2	+0.0	+1.1
Other Services	156.4	156.7	151.8	-0.3	+4.6
Government	225.8	255.3	221.3	-29.5	+4.5
Federal	42.4	44.3	43.6	-1.9	-1.2
State and Local	183.4	211.0	177.7	-27.6	+5.7
School	88.5	119.8	88.8	-31.3	-0.3

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

June 1989 (in thousands)

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MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
June* 1989	May 1989	June 1988	May- June	1988- 1989	June* 1989	May 1989	June 1988	May- June	1988- 1989
1078.0	1079.2	1040.4	-1.2	+37.6	326.2	329.7	311.9	-3.5	+14.3
48.7	40.2	58.3	+8.5	-9.6	15.6	12.8	17.5	+2.8	-1.9
4.5	3.7	5.6	---	---	4.8	3.9	5.6	---	---
4.3	4.0	5.3	---	---	4.6	4.2	5.4	---	---
1029.3	1039.0	982.1	-9.7	+47.2	310.6	316.9	294.4	-6.3	+16.2

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

933.1	945.6	922.5	-12.5	+10.6	246.1	252.3	242.0	-6.2	+4.1
139.0	138.8	139.2	+0.2	-0.2	28.7	29.1	30.4	-0.4	-1.7
107.5	107.5	108.6	+0.0	-1.1	22.8	23.2	24.6	-0.4	-1.8
4.8	4.8	5.0	+0.0	-0.2					
10.4	10.5	10.3	-0.1	+0.1					
52.2	52.1	53.3	+0.1	-1.1					
40.1	40.1	40.0	+0.0	+0.1					
31.5	31.3	30.6	+0.2	+0.9	5.9	5.9	5.8	+0.0	+0.1
6.3	6.2	6.1	+0.1	+0.2					
3.5	3.5	3.5	+0.0	+0.0					
11.9	12.0	11.8	-0.1	+0.1					
9.8	9.6	9.2	+0.2	+0.6					
0.9	0.8	0.7	+0.1	+0.2	2.1	2.1	1.8	+0.0	+0.3
60.8	60.8	65.5	+0.0	-4.7	16.8	16.7	17.1	+0.1	-0.3
51.0	50.7	50.0	+0.3	+1.0	9.3	9.3	9.2	+0.0	+0.1
27.6	27.4	26.3	+0.2	+1.3	4.9	4.8	4.8	+0.1	+0.1
23.4	23.3	23.7	+0.1	-0.3	4.4	4.5	4.4	-0.1	+0.0
242.4	243.2	233.9	-0.8	+8.5	58.4	58.4	56.5	+0.0	+1.9
56.3	56.1	54.4	+0.2	+1.9	7.2	7.1	7.0	+0.1	+0.2
186.1	187.1	179.5	-1.0	+6.6	51.2	51.3	49.5	-0.1	+1.7
27.8	28.0	27.1	-0.2	+0.7	7.7	7.8	7.2	-0.1	+0.5
31.1	31.2	29.5	-0.1	+1.6	7.9	7.9	8.0	+0.0	-0.1
23.2	22.9	21.5	+0.3	+1.7	5.6	5.5	5.6	+0.1	+0.0
64.1	64.9	62.3	-0.8	+1.8	18.4	18.6	17.8	-0.2	+0.6
39.9	40.1	39.1	-0.2	+0.8	11.6	11.5	10.9	+0.1	+0.7
73.4	73.7	74.6	-0.3	-1.2	11.7	11.6	12.3	+0.1	-0.6
246.1	247.4	244.1	-1.3	+2.0	69.1	69.3	66.6	-0.2	+2.5
24.5	25.6	23.0	-1.1	+1.5	6.8	7.0	6.5	-0.2	+0.3
60.3	60.1	61.6	+0.2	-1.3	11.2	11.2	11.4	+0.0	-0.2
59.6	59.7	59.8	-0.1	-0.2	20.0	20.1	19.3	-0.1	+0.7
101.7	102.0	99.7	-0.3	+2.0	31.1	31.0	29.4	+0.1	+1.7
119.5	130.2	114.5	-10.7	+5.0	50.0	55.8	48.1	-5.8	+1.9

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
June 1989

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	13,750	36,075	42,225	12,975	8,950	2,975	6,250
Total Unemployment	2,775	2,450	3,450	1,150	750	275	375
Rate	20.2%	6.8%	8.2%	8.9%	8.4%	9.2%	6.0%
Rate (Seas. Adj.)**	14.8%	6.5%	6.8%	8.8%	7.9%	9.2%	7.2%
Total Employment	10,975	33,625	38,775	11,825	8,200	2,700	5,875

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	13,600	24,900	36,850	10,725	5,350	2,775	3,650
Manufacturing	925	1,250	3,100	1,375	200	50	325
Mining & Quarrying	50	125	150	1,300	0	1,550	75
Construction	975	875	1,825	550	225	175	225
T.C.P.U.	1,700	1,525	2,125	375	150	50	75
Trade	1,650	5,850	9,775	2,175	1,500	225	1,225
F.I.R.E.	350	675	925	275	100	25	100
Services & Misc.	4,375	4,825	11,250	2,100	900	150	925
Government	3,575	9,775	7,700	2,575	2,275	550	700

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	33,350	25,900	39,600	11,425	38,850	52,525
Total Unemployment	1,650	3,600	3,150	1,625	1,950	11,075
Rate	4.9%	13.9%	8.0%	14.2%	5.0%	21.1%
Rate (Seas. Adj.)**	5.1%	11.3%	7.2%	12.5%	5.0%	14.6%
Total Employment	31,700	22,300	36,450	9,800	36,900	41,450

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	22,325	19,250	29,550	9,800	25,350	26,500
Manufacturing	2,675	2,075	4,175	1,275	2,350	2,075
Mining & Quarrying	175	1,175	3,650	0	850	50
Construction	1,775	1,100	1,400	350	2,175	1,450
T.C.P.U.	1,175	1,775	950	575	975	1,050
Trade	7,050	4,225	5,375	3,950	7,375	7,975
F.I.R.E.	1,025	400	775	275	1,000	975
Services & Misc.	5,450	5,000	4,000	1,600	6,025	5,975
Government	3,000	3,500	9,225	1,775	4,600	6,950

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988
Manufacturing	406.72	404.33	406.64	41.0	40.8	41.2	9.92	9.91	9.87
Aircraft & Missiles	593.62	591.91	INA	44.3	43.3	INA	13.40	13.67	INA
Food & Kindred Prod.	330.77	341.25	343.48	39.9	40.1	39.3	8.29	8.57	8.74
Primary Metals	512.45	511.43	497.80	38.1	39.1	38.8	13.45	13.08	12.83
Machinery	393.62	400.36	410.85	39.6	40.4	41.5	9.94	9.91	9.90
Copper Mining	563.99	558.95	503.48	44.2	43.6	41.1	12.76	12.82	12.25
Construction	429.68	422.18	428.95	36.6	35.9	36.6	11.74	11.76	11.72
Utilities	674.59	667.89	633.74	41.9	40.7	43.2	16.10	16.41	14.67
Retail Trade**	250.92	249.24	249.50	33.5	33.1	33.4	7.49	7.53	7.47
Wholesale Trade	371.72	371.70	394.71	38.6	38.8	40.4	9.63	9.58	9.77

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988
Manufacturing	361.57	360.99	429.73	37.9	37.8	41.6	9.54	9.55	10.33
Construction	583.14	589.81	443.17	43.1	43.4	36.9	13.53	13.59	12.01
Retail Trade**	390.82	389.39	274.16	36.8	36.7	34.1	10.62	10.61	8.04
Wholesale Trade	588.76	578.69	417.13	41.0	41.1	41.3	14.36	14.08	10.10

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988
Manufacturing	426.21	421.83	383.67	41.1	40.6	39.8	10.37	10.39	9.64
Copper Mining	449.55	438.26	531.30	37.4	36.4	42.2	12.02	12.04	12.59
Construction	265.05	264.18	382.28	34.2	34.0	36.9	7.75	7.77	10.36
Utilities	388.05	393.42	577.55	39.0	39.5	41.7	9.95	9.96	13.85

* Preliminary.

** Excludes eating and drinking places.

Note: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
June 1989

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,729,033	1,630,437	98,596	5.7%
Apache	13,738	10,974	2,764	20.1
Cochise	36,071	33,626	2,445	6.8
Coconino	42,227	38,767	3,460	8.2
Gila	12,971	11,819	1,152	8.9
Graham	8,927	8,189	738	8.3
Greenlee	2,967	2,702	265	8.9
La Paz	6,239	5,867	372	6.0
Maricopa	1,078,001	1,029,295	48,706	4.5
Mohave	33,344	31,689	1,655	5.0
Navajo	25,896	22,299	3,597	13.9
Pima	326,233	310,601	15,632	4.8
Pinal	39,610	36,448	3,162	8.0
Santa Cruz	11,424	9,804	1,620	14.2
Yavapai	38,858	36,912	1,946	5.0
Yuma	52,527	41,444	11,083	21.1

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in June

(Continued from page 9)

trade deficit for June suggest that growth in this sector will be further delayed. Also, the aircraft and missiles sector, which contains defense-related producers, experienced a similar loss of 300.

On the plus side, employment in the lumber and wood products sector rose during May and June, leading to a total of 8,700 jobs. The nondurable sector had employment growth of 300 in June with most of the activity coming from food and kindred products.

Transportation, Communications, and Public Utilities (TCPU) added 200 in June. The transportation sector, however, added 300 jobs while the public utilities sector lost 100 jobs. Over the year, the transportation sector has added 1,300 jobs (3.6 percent growth); public utilities has lost 800 (-2.2 percent growth). Reductions in this sector are the result of slower migration to the state.

Finance, Insurance, and Real Estate (FIRE) did not contribute in June as it did in May. Instead, FIRE registered a loss of 300, translating to a 1.9 percent decline over June of last year. The outlook for this industry remains depressed with little likelihood for improvement for many months.

Activity in June should be interpreted cautiously. Seasonal summer activity influenced total wage and salary employment data.

--Jalal Ahmad
Economist

'89 Version of MICRO OIS Data Base is Released

The Arizona State Occupational Information Coordinating Committee (ASOICC) has released the 1989 version of the MICRO OIS (Occupational Information System). A statewide microcomputer data base, the MICRO OIS offers a wide variety of occupational information to vocational planners, career counselors, educators and students.

This year's version of the MICRO OIS has several new modules -- 17 in all -- and several more are planned for next year. Among some of the current modules' features are: printouts of 750 occupations with an option of an accompanying supply/demand report for each occupation, a job-match process that allows individuals to give their skills and education objectives to determine possible occupations, and a listing of schools when a specific area and type of training are requested.

The MICRO OIS, which is installed at more than 60 sites in Arizona, is designed as a stand-alone system that runs on an IBM-compatible microcomputer. The basic MICRO OIS system requires 13 megabytes of memory, with more than 40 megabytes needed for full implementation of the data base.

The MICRO OIS, developed and overseen by OIS Manager Hugo Soll, Ph.D., is available at no cost to secondary schools and nonprofit organizations in Arizona. Installation of the data base is available through ASOICC.

Besides the MICRO OIS, there are two other components of Arizona's OIS program. The *OIS Users' Manual* is a valuable resource for vocational training, career counseling, and vocational evaluation. And used with either the MICRO OIS or the *OIS User's Manual* are a series of printed reports that present supply-demand data and other information.

Development and implementation of OIS is mandated by the Job Training Partnership Act and the Carl Perkins Vocational Education Act. Arizona's OIS program has been funded by the state Department of Education as well as DES, Research Administration.

More information on MICRO OIS and the OIS program is available by writing: Hugo H. Soll, Ph.D., Manager, OIS of Arizona, P.O. Box 6123, Phoenix, AZ 85005; or calling (602) 542-3860.

LMI Publications -- Hot Off the Press

The following revised publications prepared by DES, Research Administration, can be ordered by writing to the address on the back of this newsletter or by calling (602) 542-3871. One copy of each publication will be sent at no charge. Multiple copies are available at a nominal charge. DES offices can order directly from DES Supply.

Affirmative Action Planning Information (PAL-345 and PAL-346) are two publications prepared annually that contain 1988 estimates of population and labor force characteristics by sex, race, and Hispanic ethnicity. Another feature of the publication is a table showing the number of Job Service applicants in 1988 by occupational category. One publication (PAL-345) has data for Arizona, the state's metropolitan counties (Maricopa and Pima), and the major cities within those counties. The other publication (PAL-346) includes data for the state's nonmetropolitan counties.

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported by these sources.

MANUFACTURING - The city of Eloy and Pinal County received a boost from a new ceramic tile maker that plans to build a 220,000-square-foot plant which is expected to initially hire 250 people and eventually employ 700. **CeramaTile Corp.**, which incorporated in Arizona in late June, is expected to bring annual salaries and benefits worth $3.85 million and $275,000 in taxes for Eloy when the factory begins operation in May 1991. The company selected a 200-acre site near I-10 and Arizona 87 because of its proximity to two interstate highways (I-10 and I-8) and a railroad line.

Although it isn't expected to translate into additional jobs, a $200 million contract with the Army should stabilize employment (currently 3,200) at **McDonnell Douglas Helicopter Co.** in Mesa. The agreement calls for McDonnell Douglas to develop an advanced version of the Apache attack helicopter featuring new radar systems and more powerful engines, with production beginning in 1993. The Army deal would help offset the possible end of regular production of the Apaches for the U.S. government in the early 1990s.

MINING - **Phelps Dodge Corp.** plans to expand its Morenci copper mine operation over the next two years, creating 240 jobs. The $112 million expansion is expected to bring the mine's annual production to 140 million pounds and increase employment to 1,900 workers.

Workers at **Magma Cooper Co.** learned in July there won't be any early Christmas bonuses. The 3,200 workers at the San Manuel and Miami mines fell short of a production quota that would have netted an additional $9 million in wages, even though the mines' second-quarter profits increased $13 million.

CONSTRUCTION - Phoenix residents will vote October 3 on a proposition to decide if the city will finance up to $100 million of construction for a **multi-purpose or baseball-only stadium.** The city is negotiating with two parties -- a Chicago developer and Phoenix Cardinals owner Bill Bidwell -- to build a stadium for football and baseball, in which the developer will pay for about two-thirds of the $200 million cost. If negotiations fall through and voters approve the proposition, the city would solely fund the building of a baseball-only stadium.

One major government contract was awarded in July and another is expected to be approved in late August. The city of Phoenix OK'd a $47 million deal last month with PCL/Westbrook Construction Services Inc. to build **concourses at Sky Harbor International Airport's fourth terminal**, currently under construction. Tucson, meanwhile, is preparing to award a $69 million contract to Clearwater Construction of Austin, Texas, which was low bidder on the city's first **water treatment plant.**

It may be a while before construction on homes and office buildings picks up in the metropolitan Phoenix area if recently released figures do not improve. According to the **Home Builders Association of Central Ari-**

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zona, single-family and multi-family permits were down 38 percent in the first half of 1989 from last year's figures. In addition, one-fourth of the Valley's office space is vacant, and it is expected to take five years to fill the space, according to **CBS Property**, which based its estimate on absorption rates over the past two-and-one-half years.

Plaza del Rio Development of Peoria has sold two acres to Kitchell Development of Phoenix to build the **Thunderbird Professional Building.** Construction of the 25,000-square-foot commercial and office building near Sun City was expected to begin in August with a target date for completion of February 1990.

TRADE - Darien, Conn.-based **Executone Information Systems**, which manufactures and sells voice and data business-communications equipment, has laid off 30 of 150 employees at its Scottsdale office. The move is part of the company's restructuring plan, which also calls for dropping plans for a national service center in Scottsdale, expected to employ 50 people.

The supermarket wars in Arizona continue unabated. **Bashas'** recently opened three more stores, bringing the Chandler-based chain's total to 53. The newest additions are a 26,000-square-foot full-service outlet in Holbrook; a 44,000-square-foot store and its fifth on the Navajo reservation; and its first store in California, across the Colorado River in Needles. ... It was recently announced an **Albertson's Superstore** will be the major tenant in the Bell Canyon Pavillions shopping center, located at the northwestern corner of Bell Road and Interstate 17. The Idaho-based chain's store will occupy 63,000 square feet of the 366,000-square-foot center, which is currently under construction. ... **First Interstate Bank of Arizona** and **Smith's Food & Drug** have agreed on a plan for the bank to open full-service branches at most of the new Smith's stores in the state. Smith's currently has eight stores under construction in the Phoenix metropolitan area and eight other stores open or under construction in Tucson, Flagstaff, Prescott and Case Grande.

Tempe-based **Worldwide Business Systems Inc.** went out of business in mid-July. The 11-year-old copy-machine dealer, whose clients included Motorola, Luke Air Force Base and state and federal agencies, was unable to sell its business to a prospective Ohio investor. There is no information on how many people Worldwide employed.

The home-improvement store competition in the Valley continues at a fast pace. Fullerton, Calif.-based **HomeClub Inc.** has opened its second store in metropolitan Phoenix, a 100,000-square-foot facility at 3223 W. Indian School Road, which is expected to employ 100 people. HomeClub plans to operate five stores in the Phoenix area, including one in Mesa this fall. ... **Home Depot** has closed escrow on its eighth Valley location, a 100,000-square-foot store on 10 acres at Superstition Springs in Mesa. ... **The Price Club** has decided to keep its Mesa store, which generates an estimated $1 million in taxes for the city of Mesa, for at least five years. The store at 1720 E. Broadway was to have closed when a new location in Tempe opens, but city of Mesa officials convinced the San Diego-based retail chain to stay in return for water-drainage improvements at the site.

Several new or remodeled shopping centers are having success in leasing space. As a $150 million renovation nears completion, **Scottsdale Fashion Square** has announced 21 new tenants -- including The Disney

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(Continued from page 17)

Store -- have signed up and the renewal of leases for existing merchants. ... Scheduled to open in the fall, **Glendale Galleria**, a 200,000-square-foot shopping center at 59th and Peoria avenues, is 86 percent preleased, developers say. ... **Uptown Plaza**, which has undergone a $2 million facelift and expansion that includes a Parisian-style shopping street, is 95 percent leased in its older portion and will have 17 small shops in 23,000 square feet of new space. Phoenix' oldest shopping center, Uptown Plaza is located at Central Avenue and Camelback Road. ... Work is under way on the **Scottsdale Galleria**, a $123 million speciality-store center on Scottsdale Road just south of Camelback. The three-story retail center, scheduled to open in late 1990, will feature 245 shops and 1.35 million square feet of shopping and entertainment space.

FINANCE, INSURANCE and REAL ESTATE - For the first quarter of 1989, **net income of Arizona's banks** fell 66 percent from the previous quarter, to $12 million. Annual return on average assets for the quarter was 0.17 percent, second lowest among all states, only ahead of beleaguered Texas.

Arizona's largest savings and loan, **MeraBank**, has let go 160 loan officers and stopped making loans in an attempt to offset losses of $200 million in 1988 and $29 million in the first quarter of '89, which are blamed on a weak real estate market. MeraBank, a subsidiary of Pinnacle West Corp., will reduce its assets from $8 million to $5 million in the next five years by selling off subsidiaries and repossessed property. The streamlining plan will leave MeraBank with 1,700 employees, 27 percent fewer than before the recent layoffs.

Despite problems in Arizona's finance industry, two institutions are forging ahead. Arizona's fastest growing bank, **The Bank of Fountain Hills**, has changed names and picked up two Scottsdale offices when it took over Fidelity Bank of Scottsdale, which failed in July. Now know as **Fountain Hills Bank**, the institution has grown from $5 million to $15 million in deposits and has 18 employees. In May, Fountain Hills took over Grand Canyon State Bank, which also failed. ... **PriMerit Bank**, a savings bank based in Las Vegas, Nev., has opened its third and fourth branches in metropolitan Phoenix -- one each in Mesa and Sun City West -- with a fifth branch planned for Mesa by the end of the year. PriMerit has $2.7 billion in assets and $120 million in Arizona deposits.

Del Webb Corp. of Phoenix has tentatively selected a 5,700-acre site in northern Maricopa County for its third Valley retirement community. Del Webb, which developed Sun City and Sun City West in the northwest Valley and also is building retirement communities in Tucson and Las Vegas, has entered a joint agreement with **Lakeview City Inc.** to build an adult retirement area on land three miles north and east of Carefree Highway and Interstate 17.

SERVICES AND MISCELLANEOUS - In an ironic twist, a group planning a $160 million war museum has chosen as its site a 300-acre ranch once owned by John Wayne. **The Institute for the Study of American Wars** selected the historic Red River Ranch on Maricopa Road, 12 miles northwest of Casa Grande in Pinal County, as the home of the museum, which will have exhibitions on all major U.S. wars. Although the institute had only raised $60,000 by early July, the group expects a national fund-raising effort will bring in the needed $70 million for the museum's first phase. Previously, a site in

(Continued on page 19)

(Continued from page 18)

Oklahoma was chosen for the museum, but a dispute over the donation of land caused the institute to change its mind. ------

Phoenix is one of nine western cities being considered by **Security Pacific Corp.**, parent company of Security Pacific Bank, Arizona, for its consolidated credit card center. The center, which will service 1.5 million accounts, would combine operations from Phoenix, Los Angeles, Portland and Seattle and employ up to 800 workers.------

Phoenix-based **El Pollo Asado Inc.**, a fast-food chain that specializes in charbroiled chicken, is experiencing tough times and may try to restructure its loans or shut down its operation if a promotion of its new Mexican cafes fails. El Pollo Asado, which is converting its restaurants into Mexican cafes, owns nine cafes and franchises 16 others. El Pollo Asado posted small profits in 1986 and '87, but lost $7.7 million in '88 and expects losses this year. ------

Plans for a new Valley resort community, centering around a 250-room hotel, were announced in July. **Pinnacle Peak Partners** is expected to develop an 1,800-acre resort in north Scottsdale, which will include 140 private homes; a Four Seasons hotel featuring two restaurants, a health club and sports complex; and two 18-hole golf courses. The hotel, which will cost $87 million to build, is expected to be completed by fall 1990. ------

Due to high occupancy, **Westcourt in the Buttes** is spending $8 million to expand and renovate the 300-room resort in Tempe near Interstate 10 and Broadway Road. Plans call for an additional 55 rooms and suites, a 375-space parking garage, enlarging of a restaurant, and renovation of an exhibition hall.------

One of the largest franchise hair salons, **Hair Performers**, plans to double its operation in the Phoenix area in the next 18 months -- from 10 to 20 stores.------

Two major accounting companies that will merge plan to have one location for their Arizona operation in Phoenix, although no sight has been selected. **Ernest and Whinney** of Cleveland and **Arthur Young & Co.** of New York will have a total of 210 employees when the offices are joined.

GENERAL - Recent reports show state and local government trade offices in Taiwan are beginning to pay off in sales to Pacific Rim businesses. The **Arizona Department of Commerce** and the city of **Tucson's Economic Development Office** operate trade offices in the World Trade Center in Taipei, Taiwan. In its second year, Tucson's office has helped generate about $200,000 in local sales -- from pecans to laser measuring devices. The Department of Commerce, which opened an office in 1987, participated in a U.S. Products Show in June and forwarded 763 leads for Arizona companies. One company, American Export, has received orders worth $60,000 to $70,000 from contacts made at the trade show.

VOCATIONAL EDUCATION -- The **Juvenile Behavioral Training Center**, 2457 E. Broadway Road, has received a $50,000 grant from the county Board of Supervisors to provide counseling and employment training to troubled youth in south Phoenix. The center, which could receive an additional $52,000 later this year, is part of the non-profit East Valley Youth and Family Support Centers Inc. in Mesa, which provides behavioral health services.

Forecast Update in September Issue

In next month's Arizona LMI Newsletter, Research Administration updates its annual employment forecast, which came out in March. Articles will focus on the state as a whole, Maricopa and Pima counties, and nonmetropolitan counties.

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XIII No. 9
September 1989

Unemployment Rate

Seasonally Adjusted
July*

ARIZONA - 5.6%
Maricopa County - 4.6%
Pima County - 4.7%
UNITED STATES - 5.2%

Consumer Price Index

U.S. - July 1989
Base = 1982-84

Wage Earner/Clerical Worker - 123.2
% Chg. Year Ago - 5.1

All Urban - 124.4
% Chg. Year Ago - 5.0

Phoenix - 2nd Qtr 1989
Base = 1982-84

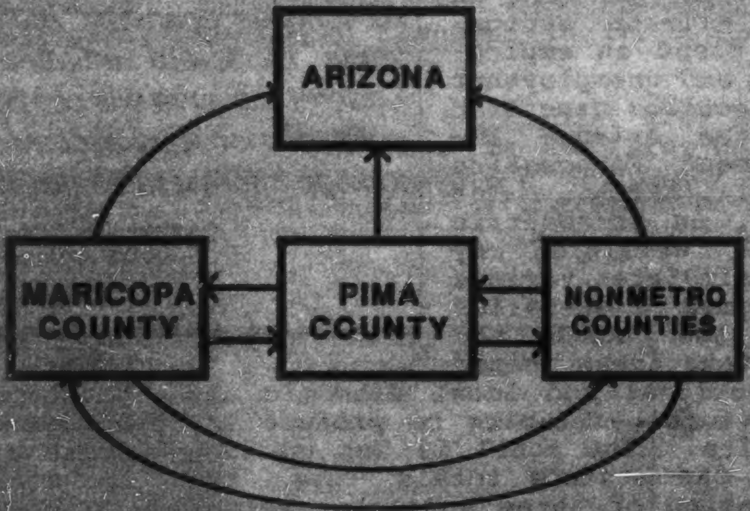
All Urban - 125.9
% Chg. Year Ago - 5.0

Tucson - 2nd Qtr 1989
Base = 1982-84

All Urban - 125.3
% Chg. Year Ago - 4.6

* Preliminary

...FORECAST UPDATE...



...RA Issues Revised Projections

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Inflation to Control Fate of State's Economy

... FORECAST UPDATE ...

Each July, the Arizona Department of Economic Security (DES), Research Administration (RA), updates its annual two-year wage and salary employment forecast, which is published in the March issue of the *Arizona LMI Newsletter*. The revised projections, which are included in the newsletter's September issue, take into account employment figures from the first six months of the year, plus other updated data.

The annual and updated forecasts, which are used for planning and budgeting by state and other government agencies, as well as the private sector, are based on employment and unemployment projections generated by the Arizona Employment Forecasting Model (AEFM). The AEFM, an econometric model developed by RA, simulates various economic scenarios for the state and substate areas based on national and local economic and behavioral variables to produce its results. The model is set up such that the state's totals are the summation of three substate regions -- Maricopa County, Pima County, and Nonmetropolitan Counties -- and some of the data in each substate region are functions of data within another region (see diagram on front page).

> *As long as economic indicators show moderate inflation, the Federal Reserve will continue its policy of monetary accomodation to keep interest rates from rising.*
>
> *--Jalal Ahmad, Ph.D.*
> *RA Economist*

At the beginning of the year, RA updates the AEFM with revised (benchmarked) employment and unemployment data from the previous two years. Then, economic assumptions and key variables (see below) about the expected performance of the national and state economy are factored into the AEFM's 250 equations to arrive at projections for the current and following years. In July, the AEFM is again updated with employment data from the first half of the year, and revised forecasts for the current and following years are issued.

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SITE CODE 733A
P.O. BOX 6123
PHOENIX, ARIZONA 85005-6123
(602) 542-3871

Brent Fine, Editor
Linda Van Calcar, Word Processor

Following is an overview of the key variables and economic assumptions used to arrive at this year's updated AEFM projections. Then, in separate articles, RA analyzes Arizona's and the state's three major sectors' economic performance for the first six months of 1989 and how the state and substate areas are expected to perform the next 18 months.

KEY VARIABLES AND ASSUMPTIONS

The key to the nation's as well as the state's economy is the rate of inflation in the near term. If inflation continues to moderate in the near term, then job growth will continue, but remain modest.

Currently, the Federal Reserve Bank is more concerned about avoiding a recession, which would result in higher unemployment rather than higher inflation. As long as economic indicators show moderate inflation, the Federal Reserve will continue its policy of monetary ac-

(Continued on page 7)

Doldrums in Manufacturing, Construction Slow Arizona's Growth First Half of Year

Preliminary figures for the first six months of 1989 reveal that Arizona's economy continued to expand, but at a modest rate. And data from the updated Arizona Employment Forecasting Model (AEFM) show that slow growth is expected to continue the remainder of the 1989 and well into next year.

Looking back at the first six months of 1989, payroll employment in Arizona grew at a negligible rate of 1.3 percent, while the national economy experienced job growth of 3.1 percent. However, the gap between growth rates should disappear as the U.S. economy slows and the Arizona economy eventually comes out of the construction and manufacturing doldrums.

... FORECAST UPDATE ...

Despite slower payroll job growth, residence-based employment improved substantially in the first six months of 1989 compared to first six months of 1988. Residence-based employment registered growth of 5.1 percent along with a 4.4 percent increase in the labor force. In 1988, residence-based employment and the labor force each only grew at rates of 2.6 percent.

Major factors that are responsible for weak job growth in the first half of 1989 compared to the first half of 1988 were the lackluster performance of manufacturing and continued downturn in the construction.

Manufacturing employment grew a meager 0.2 percent in the first half of 1989. The state's machinery manufacturing and aircraft and missiles

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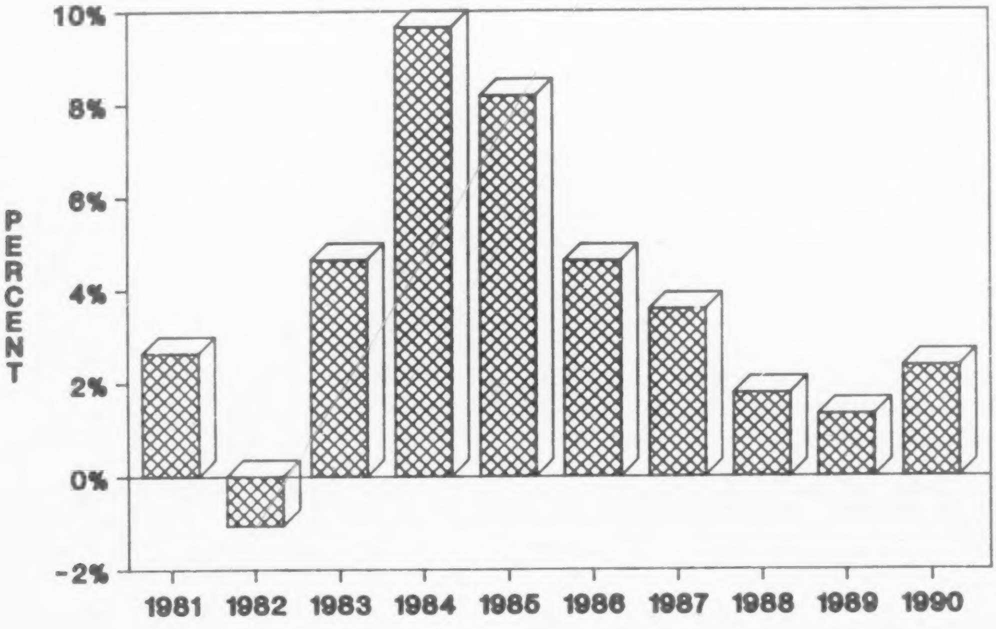

Figure 1. Arizona Wage and Salary Employment Growth Rates, 1981-1990

Table 1. Arizona Economic Forecasts (Annual Averages, in Thousands)

	1988	Growth Rate	1989	Growth Rate	1990	Growth Rate
Labor Force	1,654.0	2.6%	1,720.0	4.0%	1,778.5	3.4%
Unemployed	104.0	3.0	100.5	-3.4	113.8	13.2
Unemployment Rate	6.3%		5.8%		6.4%	
Total Employment	1,550.0	2.6	1,619.5	4.5	1,664.7	2.8
Total Wage and Salary Employment	1,410.6	1.8	1,429.4	1.3	1,463.3	2.4
Manufacturing	189.9	1.3	189.8	-0.1	193.1	1.7
Mining	12.0	5.3	12.1	0.8	12.4	2.5
Construction	93.9	-9.0	89.9	-4.3	90.8	1.0
TCPU*	72.7	1.4	72.6	-0.1	74.0	1.9
Trade	347.5	2.1	357.8	3.0	365.8	2.2
FIRE**	93.3	-1.3	91.7	-1.7	93.5	2.0
Services	361.2	4.6	370.0	2.4	383.1	3.5
Government	240.3	3.6	245.6	2.2	250.8	2.1

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTES: Totals may not add due to rounding.

SOURCE: Arizona Department of Economic Security, Research Administration, August 1989.

(Continued from page 3)

manufacturing industries cut their employment in the first half of the year. Employment in the construction industry fell 3.9 percent during this same period.

Other industries that performed poorly in the first half of 1989 were finance, insurance, and real estate (FIRE); and transportation, communications, and public utilities (TCPU). Employment in FIRE declined 1.7 percent in the first six months, while TCPU experienced negative job growth (-0.5 percent).

Industries that added jobs in the state's private sector were trade (3.2 percent), mining (2.1 percent) and services (1.7 percent). Negative job growth in business services (-1.5 percent) was responsible for weaker-than-normal growth in services.

Based on AEFM results, RA expects modest growth in inflation and employment for the remainder of this year and well into 1990. Overall, RA forecasts payroll employment in Arizona to grow only 1.3 percent in 1989, followed by a little higher growth -- 2.4 percent -- in 1990.

The reason for the sluggish growth continues to be the lackluster performance of manufacturing, still depressed construction employment, and slower in-migration.

Recently, some encouraging signs were noted in construction. With mortgage rates trending downward and the subsequent increased demand for single-family housing, the employment outlook should slowly improve. However, employment for industrial and retail construction should remain soft unless the rate of absorption of existing office space increases. Overall, construction employment is forecast to decline 4.3 percent in 1989 and increase moderately -- by 1.0 percent -- in 1990.

Employment in manufacturing will be hampered by the state's negative job

(Continued on page 5)

(Continued from page 4)

growth in the machinery and defense-related sectors. Given the weak response of the machinery sector to the fall in the dollar's value and the federal budget deficit, RA expects these sectors to reduce employment in 1989, then show a slight improvement the following year. Overall, manufacturing employment is expected to fall one-tenth of a percent in 1989, followed by an increase of 1.7 percent in 1990.

FIRE employment should continue to decline the remainder of the year with most of the losses coming from the finance industry. RA forecasts FIRE employment to decline 1.7 percent in 1989, followed by an increase of 2.0 percent in 1990.

TCPU is expected to have its overall employment base shrink by 100 jobs in 1989, fueled by a loss of 600 jobs in the public utilities in 1989. FIRE employment is expected to rebound in 1990, however, with an increase of 1.9 percent.

On the positive side, the services and trade industries will create most of the new jobs. But growth in these areas should be moderate.

RA forecasts trade to only grow 3.0 percent, followed by services with a 2.4 percent growth rate. The largest gains in these two industries should be in hotels and lodging places, automotive services, food stores, and eating and drinking places.

Overall, RA forecasts Arizona's payroll employment to grow 1.3 percent in 1989 (18,800 jobs) and 2.4 percent (33,900 jobs) in 1990. At the substate level in 1989, Maricopa County should grow 1.1 percent (10,100 jobs); Pima County, 1.0 percent (2,400 jobs); and Nonmetropolitan Counties, 2.7 percent (6,300 jobs). In 1990, Maricopa County is expected to grow 2.3 percent (22,000 jobs); Pima County, 2.2 percent (5,500 jobs), and Nonmetropolitan Counties, 2.7 percent (6,400 jobs).

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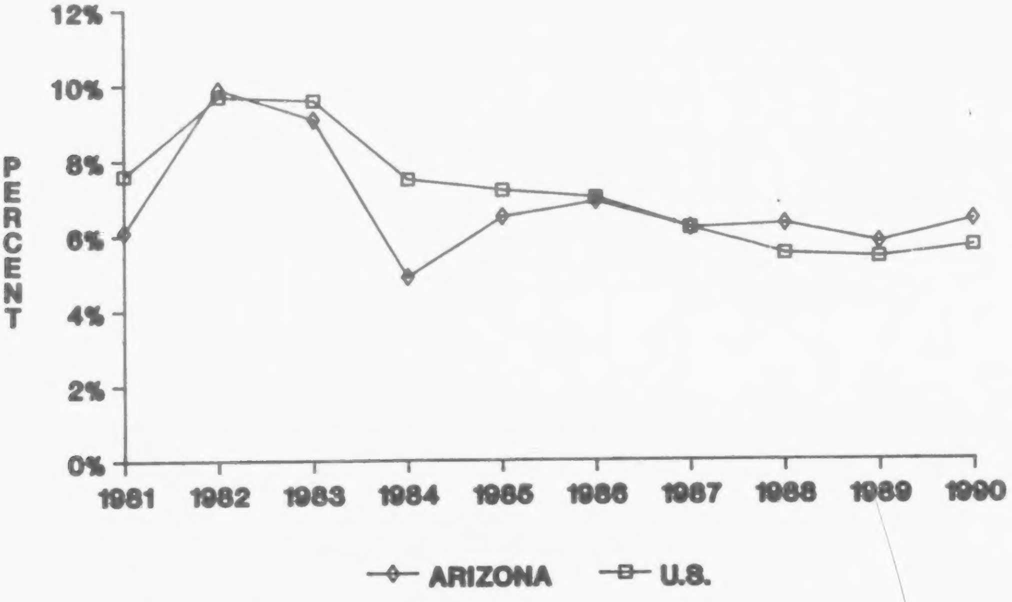

Figure 2. Arizona vs. U.S. Unemployment Rates, 1981-1990

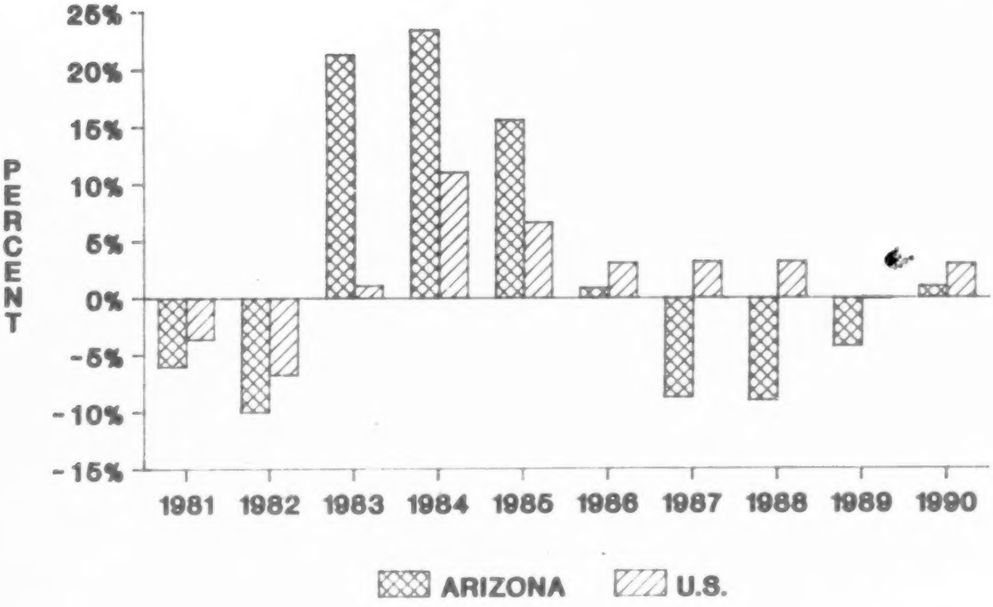

Figure 3. Arizona vs. U.S. Construction Employment Growth Rates, 1981-1990

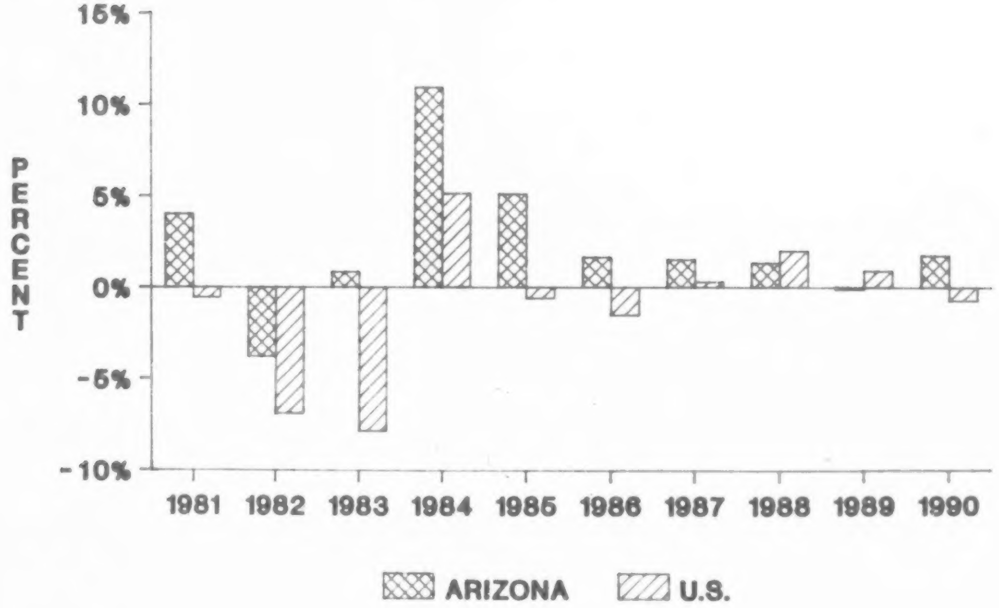

Figure 4. Arizona vs. U.S. Manufacturing Employment Growth Rates, 1981-1990

Inflation Plays Key Role in Fate of State's Economy

(Continued from page 2)

commodation to keep interest rates from rising. If inflation picks up, however, then the Federal Reserve would be compelled to reverse its easing of monetary policy, resulting in a slowdown in job growth. RA's forecast assumes inflation to moderate the remainder of this year and next year. Inflation, as measured by changes in the U.S. Consumer Price Index (CPI), will increase 4.9 percent in 1989 and 3.9 percent in 1990. In July, the over-the-year CPI for all urban consumers was 5.0 percent.

In Arizona, moderate growth in inflation should allow interest rates -- especially mortgage rates -- to come down to single-digit levels, which in turn should have a positive impact on the state's housing market. Also, moderate growth in inflation should boost consumer confidence and spending. Alternatively, higher inflation in the near term will further deteriorate the state's already depressed housing market.

Other key variables that will influence the national and state economies are the price of oil, value of the dollar, taxes, and government spending.

The outlook for oil prices has not changed significantly, but slower economic growth, plus high OPEC (Organization of Petroleum Exporting Countries) and non-OPEC production should push oil prices down in the near future. Refiners' acquisition cost of crude oil is expected to decline from about a $19 per-barrel average in the second quarter of 1989 to a $16.50 per-barrel average the second half of 1989 and $15.20 per-barrel annual average in 1990.

The value of the dollar against other currencies will largely depend on the monetary policy of the Fed and the U.S. trade position. As measured by the index of 40 trade-weighted currencies, the dollar's value is expected to fall about 3.0 percent in the second half of 1989 and another 4.0 percent in 1990. (It is important to note that the Arizona semiconductor-goods producers have not responded in expanding their employment base to the fall in the value of the dollar over the last few years.)

The outlook for federal government spending is basically unchanged for 1989 and 1990 with real defense purchases continuing to fall. The cutback in purchases has significantly impacted defense-related producers in Arizona in recent months. Finally, real U.S. Gross National Product (GNP) should grow 2.6 percent in 1989 and 2.4 percent in 1990.

Arizona Growth to Remain Sluggish Through '90

(Continued from page 5)

Finally, the state's unemployment rate should average 5.8 percent in 1989 with annual-average, residence-based employment growth of 5.0 percent and labor force growth of 4.0 percent. The unemployment rate, however, is expected to rise moderately to 6.4 percent in 1990 as more residents, who previously had given up looking for work, begin searching for jobs as the economy expands.

--Jalal Ahmad, Ph.D.
RA Economist

Maricopa County Falling Short of Modest Forecast; Slight Improvement Seen for '90

In March, DES, Research Administration (RA), said 1989 was going to be a year of slow growth for Maricopa County. With half the year now behind us, it appears 1989 growth will be even slower than RA expected.

RA now forecasts a wage and salary employment growth rate of 1.1 percent in 1989 -- down from the 1.7 percent prediction in March. That translates into only 10,100 new jobs being created this year.

Despite slower job growth, residence-based total employment will grow 4.2 percent and the labor force will expand 3.8 percent. Both of these rates are slightly greater than RA forecast in March. The total unemployed will decrease 2,700, and the unemployment rate will average only 4.8 percent, rather than the 5.4 percent predicted in March.

Next year, there will be gradual improvement in the economy as long as inflation does not rise too quickly, or too high. Currently, the Federal Reserve is more concerned with the potential for recession rather than inflation. (See "Inflation Expected to Control Fate of State's Economy," p. 2.)

Maricopa County wage and salary employment growth in 1990 will average 2.3 percent. That is still slow growth, but twice the rate of 1989.

> *Employment effects from FSLIC seizures will occur mostly in the finance industry, but there will be some ripple effects through the real estate and construction industries.*
>
> *--Ron Simon*
>
> *RA Economic Analysis Manager*

... FORECAST UPDATE ...

The construction industry has been the chief cause of slow growth during 1989, as it was in 1988 and 1987. This year, construction employment will decline 5.4 percent, or about 3,500 jobs, on an annual-average basis.

So, while construction is still losing jobs, at least the rate of decline -- 7.6 percent in 1988 -- is getting smaller. In fact, most of the loss has already occurred, and there has been a modest upward trend in May, June, and July.

RA expects continued improvement in construction (with the exception of some fall/winter seasonal loss) into 1990. There will be enough improvement to register growth of 500 jobs, or 0.8 percent, over the year.

The problems with construction have brought related losses in the finance, insurance, and real estate (FIRE) industry.

About 600 jobs were lost in FIRE in 1988, and 1,100 more will be lost in 1989. But in 1990, 1,400 of those jobs will be won back, thanks to lower interest rates.

Reduced interest rates generate more employment in the finance and real estate sectors due to increased buying activity, and additionally, more in finance as present home owners refinance to take advantage of the lower rates.

Because there have been large numbers of bankruptcies and several

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Federal Savings and Loan Insurance Corp. (FSLIC) seizures of major savings and loan institutions in Phoenix during the last year, many managers are asking how the local economy will be affected. The answer to that question is neither easy nor certain.

What happens will depend a lot on the actions of FSLIC administrators. Some of the employment losses forecast for the finance industry in 1989 are the result of savings and loan failures, but most are from the paring of inflated staffs, after an expansion in response to deregulation of the industry.

Employment effects from FSLIC seizures will occur mostly in the finance industry, but there will be some ripple effects through the real estate and construction industries. If the FSLIC administrators attempt to quickly liquidate the assets of the seized institutions, there may be more employment in the short term for real estate agents, but property values might fall precipitously, further damaging the institutions the FSLIC is trying to shore up.

Also, with fewer financial institutions and more conservative lending practices by the chastened that remain, there will be less investment capital to put into construction projects. Diminished investment capital would at the very least retard construction expansion, even if it did not cause a further downturn in the industry.

Another reason there is slow overall growth is that Phoenix-area manufacturing industries have not been sharing in the growth experienced in other parts of the nation.

RA's projection for manufacturing in 1989 is that it will grow only one-half of a percent, or by 700 jobs. Most of that growth will come in the

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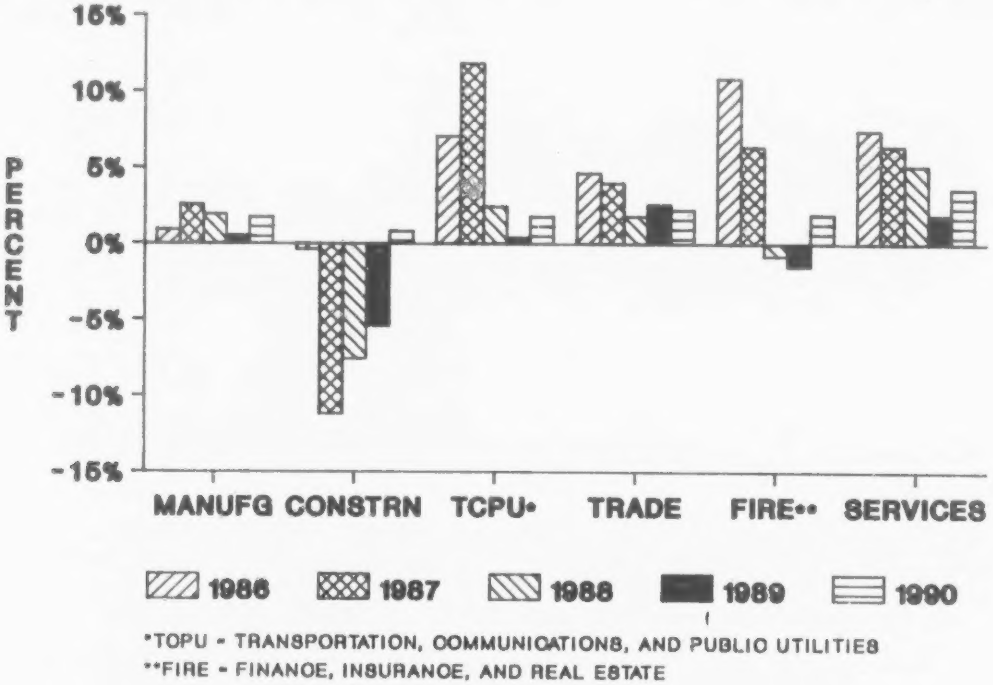

Figure 5. Maricopa County Employment Growth Rates in Selected Industries, 1981-1990

Table 2. Maricopa County Economic Forecasts (Annual Averages, in Thousands)

	1988	Growth Rate	1989	Growth Rate	1990	Growth Rate
Labor Force	1,027.7	2.7%	1,066.8	3.8%	1,105.2	3.6%
Unemployed	52.6	0.6	51.2	-2.7	57.5	12.3
Unemployment Rate	5.1%		4.8%		5.2%	
Total Employment	975.1	2.8	1,015.6	4.2	1,047.7	3.2
Total Wage and Salary Employment	931.3	1.9	941.4	1.1	963.4	2.3
Manufacturing	138.3	1.9	139.0	0.5	141.4	1.7
Mining	0.7	16.7	0.8	14.3	0.9	12.5
Construction	64.6	-7.6	61.1	-5.4	61.6	0.8
TCPU*	50.3	2.4	50.5	0.4	51.4	1.8
Trade	235.7	1.8	241.8	2.6	247.2	2.2
FIRE**	74.3	-0.8	73.2	-1.5	74.6	1.9
Services	243.9	5.1	248.5	1.9	257.5	3.6
Government	123.6	3.0	126.5	2.3	128.8	1.8

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTES: Totals may not add due to rounding.

SOURCE: Arizona Department of Economic Security, Research Administration, August 1989.

(Continued from page 9)

nondurable-goods manufacturing sectors, such as food processing, apparel, printing and publishing, chemicals, and "other nondurables."

The construction-associated manufacturing industries of lumber and wood products; and stone, clay, and glass will lose employment in 1989. Aircraft and missile manufacturing businesses lost employment in 1988 after national defense budgets were cut, but in 1989 there will be growth of about 300 jobs in those companies. The other component of high-tech manufacturing -- electrical and nonelectrical machinery -- will lose about 500 jobs over the year.

The outlook for manufacturing in 1990 is one of expected improvement, with gains up to 2,400 jobs and most of the growth in the durable goods sectors.

A former stalwart of Phoenix-area growth currently is not so vigorous. Services will add only 4,600 jobs in 1989, down from 11,900 in 1988, a rate of gain of only 1.9 percent.

The industry component most responsible for the slowing is business services, which will actually lose a 100 workers in 1989. Until recently, the temporary-help component of business services was a major contributor to services growth. Indeed, many manufacturing firms were substituting temporary help in lieu of new hires. This year, manufacturing firms have had waning need for additional help. Slowing growth in business services is another manifestation of diminished manufacturing growth.

Another cause of services' growth recession is fewer openings of new hotels in Maricopa County.

The hotel and motel industry grew at better than 13 percent rates in both 1987 and 1988. This year will see hotel and motel sector growth re-

(Continued on page 11)

Pima County Mirrors State; Cutbacks in Manufacturing, Construction Slow Job Growth

In March, DES, Research Administration (RA), predicted Pima County was going to have slow annual wage and salary employment growth of 1.2 percent. But with six months of data in for 1989, it appears that economic activity will be somewhat slower than expected with employment growth of 1.0 percent.

Next year, the Pima County economy will gradually improve as the manufacturing industry absorbs major cutbacks in employment by a few local producers and the construction industry shows some vitality. The improvement, however, will depend on the future course of inflation.

If the Federal Reserve Bank, through its monetary policy, is able to keep inflation and interest rates at low levels, Pima County's construction industry should see some positive growth in employment. (See "Inflation Expected to Control Fate of State's Economy," p. 2.)

In 1990, RA forecasts that wage and salary employment will grow 2.2 percent, which is more than twice the growth rate in either 1988 or 1989.

Total wage and salary employment grew 1.1 percent in the first six months of 1988. Despite the slower growth of payroll jobs, total employment based on place of residence grew a healthy 5.0 percent during the first six months of 1989. (Residence-based employment includes full-time and part-time workers, people working for a family business without pay, and agricultural employees.) During the same time, the

(Continued on page 12)

Maricopa County Economy Expected to Improve Slightly in '90

(Continued from page 10)

duced to 6.3 percent as the last of the major hotels are completed. Next year, there will be a further reduction -- to only a 4.0 percent growth rate.

Also, in response to local efforts to control costs of medical services, the health services' growth rate will decline to 1.0 percent in 1989 from 5.3 percent in 1988.

Trade gets credit for assuring that the Phoenix area will have some overall employment growth this year. Trade businesses will add 6,100 jobs on an annual-average basis in 1989.

Thanks to the grocery-chain wars there will be healthy employment growth -- about 4.67 percent -- among food stores. Eventually, however, there will be some casualties as new-entrant stores succeed in or withdraw from the Phoenix market. Next year will see a much-reduced growth rate in food stores -- to about 2.2 percent.

Automotive stores, too, will experience substantial gains (6.1 percent) in 1989, followed by reduced gains in 1990 (2.2 percent).

Government will also grow this year, but at a budget-restrained rate of 2.3 percent. RA expects additional restraint in 1990, with growth of 1.8 percent. Still, two-year growth in government represents 5,200 new jobs.

--Ron Simon
RA Economic Analysis Manager

(Continued from page 11)

total number of unemployed fell 3.8 percent, resulting in a decline in the unemployment rate.

RA forecasts that in 1989, on an annual-average basis, total resident employment will increase 13,900 and total number of unemployed will fall 200, resulting in an annual-average unemployment rate of 4.9 percent, slightly lower than a rate of 5.1 percent in 1988. RA expects the unemployment rate, however, to increase to 5.3 percent in 1990 as more residents start looking for jobs. (See "Doldrums in Manufacturing, Construction ...," p. 3)

(Despite the small increase in wage and salary employment, the Tucson metropolitan area's economy is diversified and stable enough to avoid severe problems. To illustrate, in the last year the Tucson economy underwent some major upheaval in its manufacturing industry (see below). If the economy was not balanced, the decline in manufacturing employment would have brought a decline in total wage and salary employment. In addition, between 1970 and June 1989, Pima County's share of state manufacturing employment has gone up nearly 5.0 percent. In the same period, Maricopa County's share has declined about 4.0 percent.)

Slow Tucson-area economic growth in 1989 is due in part to job losses in the manufacturing and construction industries. Manufacturing is expected to decline 4.3 percent in 1989, or about 1,300 jobs.

The durable goods sector of manufacturing will decline an even larger rate -- 6.5 percent, or about 1,600 jobs. Most of the antiipated job losses in this sector are the result of announced cutbacks in the machinery and defense-related

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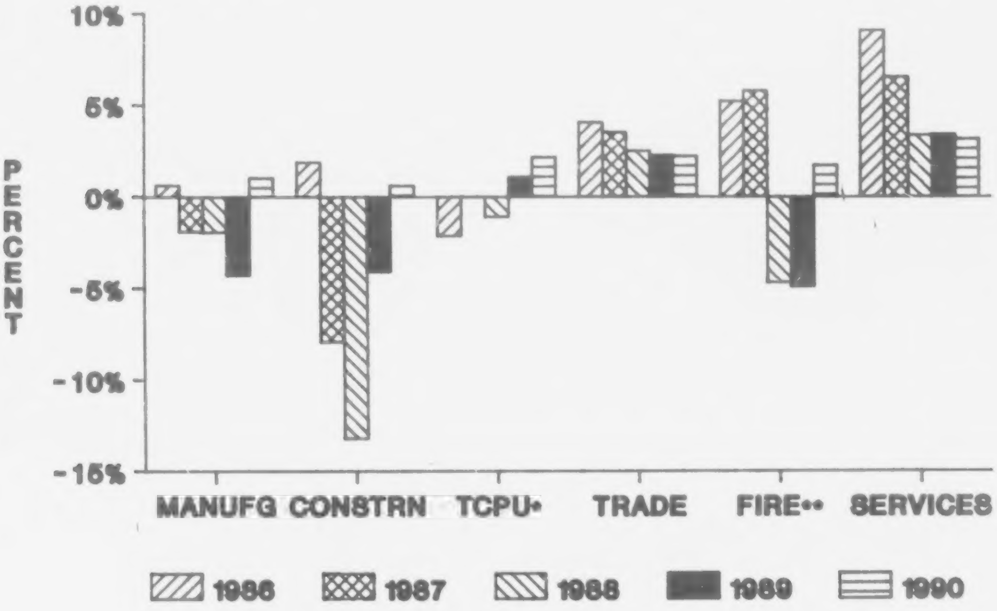

*TCPU - TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES
**FIRE - FINANCE, INSURANCE, AND REAL ESTATE

Figure 6. Pima County Employment Growth Rates in Selected Industries, 1981-1990

Youth Join U.S. Work Force in Record Numbers in July

For the second consecutive summer, record proportions of youths were in the labor force and employed in July, the Bureau of Labor Statistics of the U.S. Department of Labor reports.

The proportion of 16-to-24 year olds in the labor force in July -- the peak month for summer work activity -- was 77.5 percent, and the proportion actually employed was 69.2 percent. The youth unemployment rate in July was 10.7 percent, about the same as a year earlier. Both unemployment rates were lower than at any time in the prior two decades.

Between April and July each year, the number of 16-to-24 year olds in the labor force grows rapidly as large numbers of high school and college students search for temporary summer jobs and recent graduates look for permanent employment. This summer, the youth labor force expanded nearly 3.7 million, about the same as last year.

The proportion of youths working or looking for work -- the labor force participation rate -- reached a record high of 77.5 percent in July, exceeding the previous high attained last summer. However, due to the continuous decline of the youth population, the actual number of young workers in the labor force, 25.0 million, was 390,000 lower than in July 1988.

Once again this summer, the labor force participation rate for young women was at a new high, rising to 72.4 percent in July. Black youths also increased their labor force activity, as their participation rate was up nearly 2.5 percentage points over the year to 68.1 percent.

The rate of joblessness for young black workers of 22.8 percent was at its lowest mark since 1972. Nonetheless, black youths were still two-and-a-half times more likely than white youths to be unemployed. The jobless rate for whites was 8.9 percent.

--U.S. Department of Labor, Bureau of Labor Statistics

The Arizona Labor Force in July

Arizona's unemployment rate continued to climb in July, returning to 5.6 percent, nearly its level at the first of the year. May's drop in the unemployment rate to 5.0 percent was indeed an aberration, unsustained in level or direction.

Total unemployment increased 6,400, the largest July increase since 1981. Both total employment and wage and salary jobs decreased seasonally; total employment by 14,700 and wage and salary employment by 17,000.

The greatest part of the job loss occurred in government, especially in schools. On average, school employment drops 14.5 percent in July, and this July was on target with losses of 13,100 jobs statewide. The seasonal decline is primarily among colleges and universities. In addition, federal government dropped slightly more than seasonally.

Besides government, seasonal reductions accounted for most of job declines among industries, including mining, eating and drinking places, and hotels. However, the magnitude of those losses was less than average for July. Transportation and services each lost a bit more (200) than average, especially "other services," which includes agricultural, personal, amusement/recreational, legal, repair, and miscellaneous services.

Construction gets the most points for improvement in July. Not only did construction record its third consecutive month of employment gain, but the 900 jobs added was three-and-a-half times the average July gain in Arizona since the 1982 recession.

(Continued on page 18)

Arizona Labor Force and Employment

July 1989 (in thousands)

	ARIZONA				
				Amount Change	
	July* 1989	June 1989	July 1988	June-July	1988-1989
TOTAL CIVILIAN LABOR FORCE**	1721.6	1729.9	1657.1	-8.3	+64.5
Total Unemployment	104.8	98.4	117.7	+6.4	-12.9
Rate	6.1	5.7	7.1	----	----
Rate (Sea. Adj.)***	5.6	5.2	6.4	----	----
Total Employment	1616.8	1631.5	1539.4	-14.7	+77.4

The Above Labor Force Statistics Should

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	July* 1989	June 1989	July 1988	June-July	1988-1989
TOTAL WAGE AND SALARY	1395.2	1412.2	1376.2	-17.0	+19.0
Manufacturing	189.5	189.6	191.0	-0.1	-1.5
Durable Goods	144.8	144.7	147.8	+0.1	-3.0
Stone, Clay, and Glass	7.6	7.4	7.8	+0.2	-0.2
Primary and Fabricated Metals	15.7	15.8	15.6	-0.1	+0.1
Primary Metals	7.4	7.5	7.4	-0.1	+0.0
Fabricated Metals	8.3	8.3	8.2	+0.0	+0.1
Machinery	64.0	64.1	66.8	-0.1	-2.8
Other Durable Goods	57.5	57.4	57.6	+0.1	-0.1
Aircraft and Missiles	26.0	25.7	26.4	+0.3	-0.4
Lumber and Wood Product (Excluding Furniture)	8.6	8.7	8.5	-0.1	+0.1
All Other Durable Goods	22.9	23.0	22.7	-0.1	+0.2
Nondurable Goods	44.7	44.9	43.2	-0.2	+1.5
Food and Kindred Products	9.8	9.8	9.3	+0.0	+0.5
Apparel	4.5	4.5	4.5	+0.0	+0.0
Printing and Publishing	16.9	16.9	16.8	+0.0	+0.1
All Other Nondurable Goods	13.5	13.7	12.6	-0.2	+0.9
Mining and Quarrying	12.0	12.1	12.2	-0.1	-0.2
Copper Mining	9.1	9.1	9.0	+0.0	+0.1
Other Mining and Quarrying	2.9	3.0	3.2	-0.1	-0.3
Construction	91.8	90.9	95.2	+0.9	-3.4
Trans., Communications, & Public Utilities.	72.8	73.1	72.0	-0.3	+0.8
Transportation	37.7	37.9	36.2	-0.2	+1.5
Communications and Public Utilities	35.1	35.2	35.8	-0.1	-0.7
Trade	356.3	359.4	343.0	-3.1	+13.3
Wholesale Trade	69.1	69.8	66.9	-0.7	+2.2
Retail Trade	287.2	289.6	276.1	-2.4	+11.1
General Merchandise and Apparel	44.2	45.0	42.0	-0.8	+2.2
Food Stores	48.3	48.0	46.1	+0.3	+2.2
Automotive and Service Stations	36.2	36.0	34.2	+0.2	+2.0
Eating and Drinking Places	99.6	100.8	96.6	-1.2	+3.0
Other Retail Trade	58.9	59.8	57.2	-0.9	+1.7
Finance, Insurance, and Real Estate	92.0	92.0	93.2	+0.0	-1.2
Services and Miscellaneous	366.4	368.1	359.1	-1.7	+7.3
Hotels and Other Lodging Places	41.4	42.3	38.8	-0.9	+2.6
Business Services	77.3	76.9	77.4	+0.4	-0.1
Health Services	92.6	92.3	91.4	+0.3	+1.2
Other Services	155.1	156.6	151.5	-1.5	+3.6
Government	214.4	227.0	210.5	-12.6	+3.9
Federal	42.8	42.5	43.6	+0.3	-0.8
State and Local	171.6	184.5	166.9	-12.9	+4.7
School	76.5	89.6	76.0	-13.1	+0.5

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

Arizona Labor Force and Employment

July 1989 (in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			Amount Change					Amount Change	
July* 1989	June 1989	July 1988	June- July	1988- 1989	July* 1989	June 1989	July 1988	June- July	1988- 1989
1074.1	1076.5	1037.7	-2.4	+36.4	322.4	326.8	308.0	-4.4	+14.4
51.3	48.5	55.4	+2.8	-4.1	15.7	15.6	17.0	+0.1	-1.3
4.8	4.5	5.3	---	---	4.9	4.8	5.5	---	---
4.6	4.3	5.2	---	---	4.7	4.6	5.3	---	---
1022.8	1028.0	982.3	-5.2	+40.5	306.7	311.2	291.0	-4.5	+15.7

at Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

923.5	933.7	916.7	-10.2	+6.8	240.8	246.3	237.0	-5.5	+3.8
139.1	139.1	139.1	+0.0	+0.0	28.4	28.7	30.4	-0.3	-2.0
107.8	107.6	108.8	+0.2	-1.0	22.5	22.7	24.6	-0.2	-2.1
4.7	4.7	5.2	+0.0	-0.5					
10.4	10.4	10.3	+0.0	+0.1					
52.4	52.2	53.3	+0.2	-0.9					
40.3	40.3	40.0	+0.0	+0.3					
31.3	31.5	30.3	-0.2	+1.0	5.9	6.0	5.8	-0.1	+0.1
6.3	6.3	6.1	+0.0	+0.2					
3.5	3.5	3.4	+0.0	+0.1					
11.9	11.9	11.9	+0.0	+0.0					
9.6	9.8	8.9	-0.2	+0.7					
0.8	0.8	0.7	+0.0	+0.1	2.1	2.1	1.8	+0.0	+0.3
61.5	60.9	65.6	+0.6	-4.1	16.8	16.9	17.1	-0.1	-0.3
50.6	51.0	50.0	-0.4	+0.6	9.5	9.5	9.1	+0.0	+0.4
27.3	27.6	26.4	-0.3	+0.9	4.9	4.9	4.7	+0.0	+0.2
23.3	23.4	23.6	-0.1	-0.3	4.6	4.6	4.4	+0.0	+0.2
240.0	242.5	232.6	-2.5	+7.4	58.2	58.5	56.5	-0.3	+1.7
56.0	56.3	54.0	-0.3	+2.0	7.2	7.2	7.1	+0.0	+0.1
184.0	186.2	178.6	-2.2	+5.4	51.0	51.3	49.4	-0.3	+1.6
27.3	27.8	27.0	-0.5	+0.3	7.6	7.8	7.2	-0.2	+0.4
31.4	31.1	29.4	+0.3	+2.0	8.1	7.9	8.1	+0.2	+0.0
23.1	23.1	21.6	+0.0	+1.5	5.6	5.6	5.7	+0.0	-0.1
62.9	64.3	62.0	-1.4	+0.9	18.3	18.4	17.7	-0.1	+0.6
39.3	39.9	38.6	-0.6	+0.7	11.4	11.6	10.7	-0.2	+0.7
73.4	73.4	74.3	+0.0	-0.9	11.6	11.6	12.3	+0.0	-0.7
244.4	246.4	242.9	-2.0	+1.5	69.1	69.0	66.3	+0.1	+2.8
23.7	24.5	22.0	-0.8	+1.7	6.4	6.7	6.2	-0.3	+0.2
60.3	60.6	61.3	-0.3	-1.0	11.7	11.1	11.4	+0.6	+0.3
59.8	59.6	59.9	+0.2	-0.1	20.2	20.1	19.5	+0.1	+0.7
100.6	101.7	99.7	-1.1	+0.9	30.8	31.1	29.2	-0.3	+1.6
113.7	119.6	111.5	-5.9	+2.2	45.1	50.0	43.5	-4.9	+1.6

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
May 1989

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	14,150	35,550	44,375	13,100	8,975	2,900	6,050
Total Unemployment	2,875	2,400	3,550	1,225	700	250	425
Rate	20.3%	6.8%	8.0%	9.4%	7.8%	8.6%	7.0%
Rate (Seas. Adj.)**	14.4%	6.9%	6.7%	9.7%	7.5%	7.9%	7.2%
Total Employment	11,275	33,150	40,825	11,875	8,275	2,650	5,625

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	13,875	24,300	38,550	10,725	5,375	2,650	3,625
Manufacturing	925	1,250	3,150	1,375	200	50	350
Mining & Quarrying	50	125	150	1,300	0	1,550	75
Construction	975	875	1,925	600	225	175	225
T.C.P.U.	1,700	1,525	2,275	375	175	50	75
Trade	1,650	5,750	10,000	2,250	1,500	225	1,225
F.I.R.E.	375	675	950	275	100	25	100
Services & Misc.	4,475	4,850	11,125	2,175	900	125	900
Government	3,725	9,250	8,975	2,375	2,275	450	675

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	33,825	27,575	38,800	11,425	39,300	49,025
Total Unemployment	1,650	3,700	3,050	2,000	2,200	13,750
Rate	4.9%	13.4%	7.9%	17.6%	5.6%	28.0%
Rate (Seas. Adj.)**	5.1%	10.8%	7.2%	12.6%	5.9%	17.1%
Total Employment	32,175	23,875	35,750	9,425	37,100	35,275

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	22,425	20,325	28,725	9,425	25,275	25,550
Manufacturing	2,625	2,100	4,175	1,275	2,400	2,075
Mining & Quarrying	175	1,175	3,675	0	775	50
Construction	1,875	1,225	1,400	350	2,250	1,425
T.C.P.U.	1,225	1,800	950	550	1,000	1,050
Trade	7,100	4,450	5,275	3,725	7,300	7,575
F.I.R.E.	1,050	400	775	275	1,000	950
Services & Misc.	5,475	5,375	3,900	1,600	6,100	5,925
Government	2,900	3,800	8,575	1,650	4,450	6,500

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.
** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	July* 1989	June 1989	July 1988	July* 1989	June 1989	July 1988	July* 1989	June 1989	July 1988
Manufacturing	407.64	405.78	407.36	40.4	40.7	40.9	10.09	9.97	9.96
Aircraft & Missiles	616.03	601.20	INA	44.9	44.5	INA	13.72	13.51	INA
Food & Kindred Prod.	347.60	337.98	342.95	39.5	39.3	40.3	8.80	8.60	8.51
Primary Metals	516.62	512.45	503.62	37.6	38.1	38.8	13.74	13.45	12.98
Machinery	386.51	396.81	407.13	39.4	39.8	41.0	9.81	9.97	9.93
Copper Mining	565.34	562.72	527.10	45.3	44.1	42.0	12.48	12.76	12.55
Construction	436.60	429.16	428.70	37.0	36.4	36.3	11.80	11.79	11.81
Utilities	710.21	669.98	638.73	41.9	41.9	42.3	16.95	15.99	15.10
Retail Trade**	256.96	253.01	249.83	33.9	33.6	33.4	7.58	7.53	7.48
Wholesale Trade	390.25	371.72	395.18	39.7	38.6	39.4	9.83	9.63	10.03

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	July* 1989	June 1989	July 1988	July* 1989	June 1989	July 1988	July* 1989	June 1989	July 1988
Manufacturing	431.26	428.48	433.87	40.8	41.2	41.4	10.57	10.40	10.48
Construction	451.33	446.49	443.72	37.3	36.9	36.4	12.10	12.10	12.19
Retail Trade**	276.85	269.26	274.63	35.0	34.3	34.2	7.91	7.85	8.03
Wholesale Trade	404.00	389.22	421.30	40.0	39.0	40.2	10.10	9.98	10.48

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	July* 1989	June 1989	July 1988	July* 1989	June 1989	July 1988	July* 1989	June 1989	July 1988
Manufacturing	364.43	358.13	377.67	38.2	37.5	39.3	9.54	9.55	9.61
Copper Mining	635.55	583.14	606.39	44.6	43.1	43.5	14.25	13.53	13.94
Construction	397.94	389.71	385.61	37.4	36.8	36.9	10.64	10.59	10.45
Utilities	585.63	581.98	587.44	40.5	41.1	41.9	14.46	14.16	14.02

* Preliminary.

** Excludes eating and drinking places.

Note: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
July 1989

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,721,653	1,616,822	104,831	6.1%
Apache	14,163	11,282	2,881	20.3
Cochise	35,554	33,146	2,408	6.8
Coconino	44,376	40,835	3,541	8.0
Gila	13,107	11,874	1,233	9.4
Graham	8,973	8,269	704	7.8
Greenlee	2,893	2,649	244	8.4
La Paz	6,059	5,628	431	7.1
Maricopa	1,074,104	1,022,832	51,272	4.8
Mohave	33,824	32,173	1,651	4.9
Navajo	27,572	23,877	3,695	13.4
Pima	322,430	306,686	15,744	4.9
Pinal	38,821	35,761	3,060	7.9
Santa Cruz	11,437	9,430	2,007	17.5
Yavapai	39,296	37,099	2,197	5.6
Yuma	49,043	35,281	13,762	28.1

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in July

(Continued from page 13)

Arizona manufacturing dragged through another month, losing 100 jobs and bringing the over-the-year loss to 1,500 jobs. Most of this year's loss came at the expense of Pima County where several major employers terminated operations. The only sectors that showed July improvement were aircraft and missiles; and stone, clay, and glass.

Trade lost employment in July as it has in July of each of the past eight years. However, the 1989 decline of 900 was less than average for post-recession years. Over-the-year growth in trade at 3.9 percent (13,300 jobs) has been positive. Services also declined in July but, like trade, much less than average during the post-recession period. Services still stands at a 2.0 percent growth rate, or 7,300 jobs over the year, about half of last year's growth.

The state's highest county unemployment rate was again in Yuma County (17.1 percent) where agricultural activity was at a summer low. However, the effects of recent flooding will not be apparent until August's statistics are released. The lowest nonmetropolitan county rate was in Mohave County (5.1 percent) where growth in Bullhead City, and Laughlin, Nevada, across the Colorado River, has provided ample employment opportunities.

--Ron Simon
RA Economic Analysis Manager

Table 3. Pima County Economic Forecasts (Annual Averages, in Thousands)

	1988	Growth Rate	1989	Growth Rate	1990	Growth Rate
Labor Force	311.9	1.6%	325.6	4.4%	336.3	3.3%
Unemployed	16.0	2.6	15.8	-1.2	17.8	12.7
Unemployment Rate	5.1%		4.9%		5.3%	
Total Employment	295.9	1.5	309.8	4.7	318.5	2.8
Total Wage and Salary Employment	247.1	0.9	249.5	1.0	256.0	2.2
Manufacturing	30.4	-1.9	29.1	-4.3	29.4	1.0
Mining	1.8	12.5	2.1	16.7	2.2	4.8
Construction	17.1	-13.2	16.4	-4.1	16.5	0.6
TCPU*	9.1	-1.1	9.2	1.1	9.4	2.2
Trade	57.0	2.5	58.3	2.3	59.6	2.2
FIRE**	12.2	-4.7	11.6	-4.9	11.8	1.7
Services	67.5	3.4	69.8	3.4	72.0	3.2
Government	51.9	4.2	53.0	2.1	54.1	2.1

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTES: Totals may not add due to rounding.

SOURCE: Arizona Department of Economic Security, Research Administration, August 1989.

Construction, Manufacturing Losses Slow Growth in Pima County

(Continued from page 12)

industries (e.g., International Business Machines and Hughes Aircraft Corp.). The decline in employment in these industries will continue through the end of this year, but there should be enough improvement in 1990 to register employment growth of 200 jobs.

The nondurable-goods sector, on the other hand, is expected to add 100 jobs in 1989 with most of the jobs coming from the printing and publishing, and food processing sectors. RA forecasts that the nondurable-goods sector will add about 200 jobs in 1990.

Another reason for Pima County's slow economic growth is the continuation of the slide in the construction industry that started in the middle of 1986. Construction has experienced some renewed growth in the last few months, adding a few hundred jobs. Most of the gains, however, could be regarded as seasonal.

RA contends that new activity will not be sufficient to call for an end of the construction doldrums this year. In 1989, employment in construction will decline 4.1 percent, or 700 jobs.

The outlook for construction depends first on how fast existing space is absorbed, and second on the level of interest rates. Relatively low interest rates will somewhat reinvigorate the industry as investors find it profitable to infuse new capital into projects. Similarly, the buyers of single-family houses will also be attracted by low mortgage rates.

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(Continued from page 19)

If the Federal Reserve continues its policy of easy credit, interest rates will stay at low levels in the near future. With a reasonable assumption of low inflation and interest rates, Pima County construction is expected to turn around and grow 0.6 percent, or 100 jobs, in 1990.

The decline in manufacturing and construction employment, and the recent troubles of the finance industry's savings and loan institutions, impacted employment in the finance, insurance, and real estate (FIRE) industries. FIRE employment will shrink 4.9 percent, or 600 jobs, this year. But with a better outlook for manufacturing and construction next year, FIRE is expected to grow 1.7 percent, or 200 jobs, in 1990.

> *Services and trade will create most of the jobs in 1989 and 1990 in Pima County. Services will grow 3.4 percent, or 2,300 jobs, in 1989 and will have a similar growth rate -- 3.2 percent, or 2,200 jobs -- in 1990.*
>
> *--Jalal Ahmad, Ph.D.*
> *RA Economist*

Industries that will create wage and salary jobs in the private sector are mining, trade, and services. Mining will add 300 jobs in 1989 after creating 200 jobs in 1988. Even though the increase is minimal, at least it helps make up for the loss of some jobs in the durable goods sector of manufacturing. In 1990, mining will add about 100 jobs.

Services and trade will create most of the jobs in 1989 and 1990 in Pima County. Services will grow 3.4 percent, or 2,300 jobs, in 1989 and will have a similar growth rate -- 3.2 percent, or 2,200 jobs -- in 1990. Hotels and lodging places, and health services will account for most of that growth.

Trade, on the other hand, will grow at a moderate rate of 2.3 percent, or 1,300 jobs, in 1989, followed by 2.2 percent growth in 1990. The wholesale trade sector, after declining 6.7 percent in 1988, will grow 1.4 percent in 1989, or about 100 jobs.

Weak employment growth in trade is due to overall slower economic activity in the Tucson metropolitan area and partially to a weak Mexican economy and peso. In 1989, the retail trade sector will grow 2.6 percent, or 1,300 jobs, and 2.1 percent in 1990. Most of that job growth should come from eating and drinking places, followed by department and hardware stores.

Employment in government is expected to grow at a moderate rate -- 2.1 percent -- this year. A net addition of 500 jobs should come from the state and local government sector.

In summary, 1989 will be the bottom of the downturn in construction and manufacturing industries in the Tucson metropolitan area. By 1990, both industries will grow again, albeit at a slower rate.

In 1989, total wage and salary employment will grow 1.0 percent, or 2,400 jobs, followed by 2.2 percent, or 5,500 jobs, in 1990. This outlook could be less promising if both inflation and interest rates go up, or if the national economy suffers a general recession.

--Jalal Ahmad, Ph.D.
RA Economist

Rural Counties Outshine Urban Cousins Thanks to Service-Producing Sectors

The economic outlook for Nonmetropolitan Counties (all but Maricopa and Pima) continues to be brighter than that for Arizona's metropolitan areas.

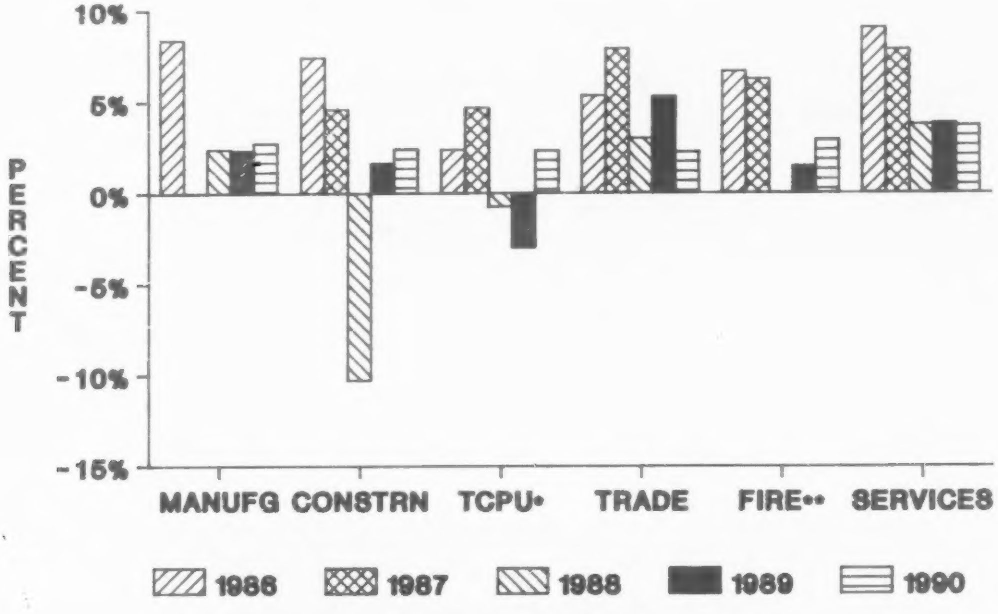
Based on wage and salary employment statistics for the first six months of 1989, overall employment growth for the year is forecast to be 2.7 percent (6,300 jobs). About the same growth rate (6,400 jobs) is forecast for 1990.

If these projections hold true, then Nonmetropolitan Counties will have chalked up five consecutive years of higher wage-and-salary employment growth rates than the state's two metropolitan counties (Maricopa and Pima). In creation of actual wage and salary jobs, however, Nonmetropolitan Counties (12,700) come out on top of Pima County (7,800), but are far behind Maricopa County (32,100).

Following the lead of the nation and the state's metropolitan counties, most of the employment gains in Arizona's rural counties will be derived from service-producing industries.

The service-producing industries -- transportation, communication, and public utilities (TCPU); trade; finance, insurance, and real estate (FIRE); services; and government -- are forecast to grow 3.1 percent (5,800 jobs) in 1989. In 1990, growth should be slightly less -- at 2.8 percent (5,500 jobs). The goods-

(Continued on page 22)



*TOPU - TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES
**FIRE - FINANCE, INSURANCE, AND REAL ESTATE

Figure 7. Nonmetropolitan Counties Employment Growth Rates in Selected Industries, 1981-1990

Table 4. Nonmetropolitan Counties Economic Forecasts (Annual Averages, in Thousands)

	1988	Growth Rate	1989	Growth Rate	1990	Growth Rate
Labor Force	314.4	3.4%	327.6	4.2%	337.0	2.9%
Unemployed	35.4	6.9	33.5	-5.4	38.5	14.9
Unemployment Rate	11.3%		10.2%		11.4%	
Total Employment	279.0	2.9	294.1	5.4	298.5	1.5
Total Wage and Salary Employment	232.2	2.3	238.5	2.7	244.9	2.7
Manufacturing	21.2	2.4	21.7	2.4	22.3	2.8
Mining	9.5	3.3	9.2	-3.2	9.3	1.1
Construction	12.2	-10.3	12.4	1.6	12.7	2.4
TCPU*	13.3	-0.7	12.9	-3.0	13.2	2.3
Trade	54.8	3.0	57.7	5.3	59.0	2.3
FIRE**	6.8	0.0	6.9	1.5	7.1	2.9
Services	49.8	3.8	51.7	3.8	53.6	3.7
Government	64.8	4.2	66.1	2.0	67.9	2.7

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTES: Totals may not add due to rounding.

SOURCE: Arizona Department of Economic Security, Research Administration, August 1989.

(Continued from page 21)

producing industries -- manufacturing; mining; and construction -- are forecast to grow at a sluggish 0.9 percent (400 jobs) in 1989. Growth expectations for 1990 are considerably better -- at 2.3 percent (1,000 jobs).

The unemployment rate for the first half of 1989 in Arizona's rural counties averaged 9.6 percent. This is down from the 11.3 percent experienced in 1988. However, forecasted higher unemployment in the second half of 1989 will push up the unemployment rate for the year to 10.2 percent. The rate is expected to increase further in 1990 to 11.4 percent.

Nonmetropolitan Counties' manufacturing employment grew 500 jobs in 1988. The 1989 forecast indicates manufacturing will have the same increase, or a growth rate of 2.4 percent. Forecasts for 1990 look even better with a growth rate in the 2.8 percent range (600 jobs).

RA's forecast reveals that while most of 1989's growth will stem from the nondurable-goods sector, 1990's growth will be in the durable-goods sector. While the metropolitan areas are experiencing sluggish or even negative manufacturing employment growth, the rural counties are holding their own in that area.

Mining in rural Arizona, which has been enjoying employment expansion for several years, will contract 3.2 percent (300 jobs) in 1989. Mining employment in 1990 is forecast to be up 1.1 percent (100 jobs). Some of the employment decrease in 1989 is attributable to one company having to lay off employees while it restructures its finances and changes mining methods.

Unlike the rest of Arizona, Nonmetropolitan Counties are exper-

(Continued on page 23)

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iencing net increases in construction employment. The forecast for 1989 is for 1.6 percent growth in employment (200 jobs), with expectations for 1990 slightly better at 2.4 percent (300 jobs).

TCPU will be the only service-producing industry to lose employment in 1989. A decrease of 3.0 percent (400 jobs) is expected in 1989. All the losses are in public utilities and are the result of the completion of several large projects. In 1990, the forecast is for 2.3 percent employment growth (300 jobs).

Employment in trade, which is responsible for more than one-quarter of Nonmetropolitan Counties' total employment, is expected to continue to do well the next two years. Employment growth projections for trade in 1989 are a robust 5.3 percent (2,900 jobs), followed by a slower, but solid, 2.3 percent (1,300 jobs) in 1990.

Last year did not provide any employment growth for FIRE. However, modest growth of 1.5 percent (100 jobs) is expected in 1989 and projections for 1990 are almost double -- 2.9 percent (200 jobs).

Employment in FIRE is greatly influenced by construction activity and interest rates. With interest rates coming down and construction activity increasing, FIRE is expected to continue to enjoy employment gains.

Compared to a high growth rate in the mid-1980s, services' employment rate slowed substantially in 1988. And with the domestic economy pre-

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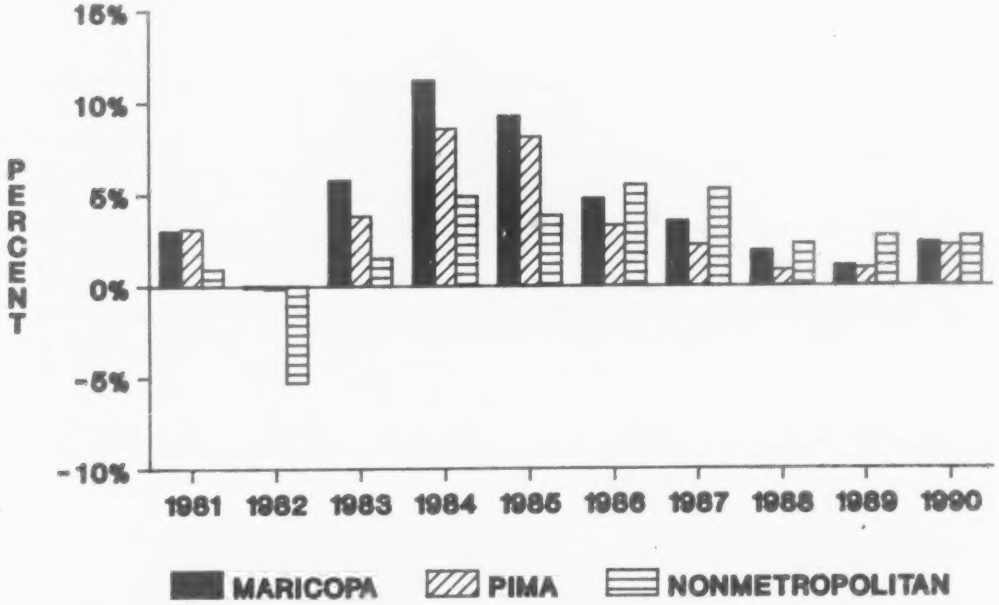

Figure 8. Metropolitan Counties (Pima and Maricopa) vs. Nonmetropolitan Counties Wage and Salary Employment Growth Rates, 1981-1990

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sently growing slowly, 1989 employment growth for services in Arizona's rural counties is expected to be a moderate 3.8 percent (1,900 jobs). Not much will change in 1990 as expectations for growth run at 3.7 percent (1,900 jobs).

Although government, Nonmetropolitan Counties' largest employer, is relatively stable, the levels of federal, state and local budgets can greatly affect government employment growth. And recent budget constraints and slower population growth have resulted in lower growth in government employment. RA's forecast calls for 2.0 percent (1,300 jobs) growth in 1989, followed by a slight acceleration to 2.7 percent (1,800 jobs) in 1990.

> *...the rural areas have shown more resilience than the urban areas, and the outlook for Nonmetropolitan Counties remains positive.*
>
> *--Marc A. Marra*
> *RA Economist*

With growth slowing in the United States and Arizona's metropolitan areas, the state's rural counties are following suit. However, the rural areas have shown more resilience than the urban areas, and the outlook for Nonmetropolitan Counties remains positive. In addition, rural counties with the greatest diversification of industries will have the most to gain in the future.

--Marc A. Marra
RA Economist

BLS: Manufacturing Accounted for Half of '88 Mass Layoffs

The U.S. Department of Labor's Bureau of Labor Statistics reported in early August its program on mass layoffs showed that 450,300 workers in 1988 were part of mass-layoff actions in 1,951 business establishments in the 42 states that provided data. These layoffs occurred in 2,322 separate layoff events. More than three-fourths of the workers (349,395 persons) filed claims for unemployment insurance benefits.

The Mass Layoff Statistics (MLS) program is a federal-state cooperative effort that covers layoffs of at least 31 days, involving 50 or more employees who filed initial claims for unemployment insurance benefits over a consecutive three-week period. About 13 percent of the layoff events in 1988 resulted in closure of the entire establishment.

The 1988 data show that mass layoffs in manufacturing industries continued by far to exceed those in other industries, accounting for slightly more than half of all layoff events. More than half of the manufacturing layoffs, in turn, occurred in the durable goods sector, led by transportation equipment and electrical equipment industries. In nondurable goods, there was an even greater concentration of layoff events, with food processing and apparel manufacturing accounting for two-thirds of the workers who lost jobs.

In nonmanufacturing establishments, construction had the most layoffs, followed by services and trade. Taken together, establishments in these three industries accounted for seven out of 10 nonmanufacturing layoff events.

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For the same period in Arizona, 36 percent of mass-layoff events were in manufacturing industries, 39 percent in nonmanufacturing industries, and 25 percent in the agricultural sector.

"Seasonal work" and "contract completion" were given as reasons for about 38 percent of the U.S. layoff events. Outside of these two categories where layoffs are typical and usually expected, "slack work" was the most frequent other reason cited (19 percent), followed by "business ownership change" (4 percent) and "bankruptcy" and "domestic relocation" (3 percent each).

Other data highlights were:

- More than half the layoff events reported in the 42 states took place in 10 states -- Alabama, Arizona, Florida, Louisiana, Massachusetts, Minnesota, New Jersey, Pennsylvania, Texas, and Wisconsin.
- Of the 349,395 initial claimants for unemployment compensation in the 42 states, 7 percent were Hispanic, 41 percent were women, and 13 percent were at least 55 years of age. In 36 states reporting data for blacks, their proportion of initial claimants was nearly 17 percent.
- Reflecting the overall economic growth, the number of businesses with layoffs, the number of layoff situations, and the number of workers separated each declined by around 10 percent in the 29 states for which data are available for both 1987 and 1988.

Currently, 49 states and the District of Columbia are participating in the program.

--U.S. Department of Labor, Bureau of Labor Statistics

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported by these sources.

MANUFACTURING - Fourteen companies from Arizona and other states have signed letters of intent to participate with **Arizona State University** in building a $36 million computer chip factory and research center. The group, called the **Semiconductor Manufacturing Automation Consortium (SemiMac)**, hopes the factory will improve the companies' competitiveness in the international market -- by cutting costs and developing improvements in the speed of manufacturing chips. SemiMac could begin operation as early as Oct. 1 and plans to open the factory on five acres at the ASU Research Park in Tempe by 1991. The plant could employ between 50 and 100 permanent workers.

Imperial Chemical Industries PLC expects to employ 200 people when it opens a 200,000-square-foot chemical plant in Chandler in 1991. The facility will be leased by ICI Composites of Tempe, a subsidiary of London-based ICI, one of the largest chemical companies in the world.

Forty-six employees at an **American Telephone & Telegraph (AT&T)** cable factory in west Phoenix have been laid off in relation to the dropping of product line. The cutback leaves AT&T with 2,300 workers at the 51st Avenue and Van Buren Street plant.

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MINING - Two Arizona mines have been acquired by Tucson-based **Arimetco Inc.**, which plans to use a high-tech process -- extraction-electrowining -- to produce low-cost copper. Arimetco expects the **Johnson Camp** mine near Benson to start operation by early next year and produce 25,000 pounds of ore a day, while an estimated production of 6,000 pounds a day is expected at the **Emerald Isle** mine near Kingman when operations begin later this year. About 35 miners will be employed at the Johnson Camp mine.

CONSTRUCTION -- **Sun Cor Development Co.**, a subsidiary of Pinnacle West Corp., has broken ground on **Talavi**, a 125-acre development at Bell Road and 59th Avenue. Talavi will include a 65-acre business park; 28-acre community shopping center; and hotel, garden office, and restaurants.

TRADE -- Phoenix-based **SuperRx Drug Stores**, which has 32 outlets in the Valley, plans to open 12 to 14 "Express" stores over the next year. The smaller stores -- 1,800 vs. 8,000-12,000 square feet -- are similar to convenience stores and designed for quicker service.

One of the nation's largest consumer-electronics and appliance retailers, **Circuit City**, will open two 33,000-square-foot stores in the Valley by fall. The "Superstores," which will be located at two malls -- **Metrocenter and Scottsdale Pavilions** -- are expected to gross $17 million a year in sales. Richmond, Va.-based Circuit City, which has 133 stores, will wait until February before announcing further expansion plans.

Meanwhile, the competitiveness of the consumer-electronics business took its toll on a major chain in Arizona. Three creditors of **Home America TV Appliance & Audio**, which operated stores in Phoenix, Tucson, and Yuma, have filed a request in federal Bankruptcy Court to take over sale of the company's assets. Home America, which owes the creditors $10 million, closed its 24 stores in Arizona, Texas and Las Vegas in mid-August, then began liquidation of its assets.

Mesa-based **Mega Foods** is adding fuel to the grocery store wars with the opening of new stores in Glendale and Yuma with plans for six more stores (five in the Valley and one in Flagstaff) in Arizona next year. In addition, Mega, which now has seven stores, is negotiating to open eight other stores throughout the state in the future.

FINANCE, INSURANCE and REAL ESTATE - **Home sales in the Phoenix area** rose 16 percent in the second quarter of this year, according to the Arizona Regional Multiple Listing Service. Statewide sales, however, dropped 14.2 percent during that same period. Part of sales increase in the Valley is attributed to a 2 percent drop in home prices -- from $79,000 to $78,200 -- from the previous quarter.

SERVICES AND MISCELLANEOUS - The sale of **Ramada Inc.'s** worldwide hotel chain will mean the loss of jobs for half of Ramada's 350 employees at its company headquarters on East Van Buren Street in Phoenix. New owners **New World Development Co. Ltd. of Hong Kong and Prime Motor Inns of Fairfield, N.J.**, will begin laying off an estimated 175 workers when the transaction is completed in mid-September. The sale, however, will not affect 350 workers at the chain's reservations center in Phoenix.

Marriott Corp. has begun construction of its fifth Courtyard hotel in the Phoenix area. The 155-unit **Camelback Courtyard**, to be located

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near 20th Street and Camelback Road, is expected to be completed by next July. Marriott plans to build an additional six to eight hotels in Arizona during the next five years.

Parks Inns International of Dallas expects to have five hotels in the Phoenix area by mid-1990. Parks Inns, which also plans to open hotels in Tucson and Flagstaff, is currently looking to buy or franchise existing properties in the Phoenix area, as well as finding a developer to build hotels.

Camelback Hospitals has recently let go 60 workers due to shortened patient stays. Camelback, which now employs 950 workers at its four psychiatric hospitals, three live-in treatment centers, and 12 outpatient clinics, says the time of stays this year has dropped 30 percent compared to 1988. Pressure from insurers and other payers to shorten stays is blamed for the dropoff.

Declines in time of patient stays and the loss of business with Intergroup, southern Arizona's largest health maintenance organization, are blamed for the layoff of 37 employees at **Tucson Medical Center.** The reductions, part of a $5.1 million cost-cutting measure, cover a variety of positions, including support staff and nurses.

A $10.2 million rehabilitation facility, which will provide 150 jobs, is planned for northwest Tucson. **Southern Arizona Rehabilitation Hospital,** which will specialize in helping patients with traumatic injuries, will open in a year and be built next to Northwest Hospital, 6200 N. La Cholla Blvd. Both hospitals are owned by **HealthTrust Inc. of Nashville, Tenn.**

TRANSPORTATION, COMMUNICATIONS AND PUBLIC UTILITIES (TCPU) -- **Lockheed Corp.** expects to open an aircraft maintenance and modification center at **Tucson International Airport** by next June that will initially employ 190 people, and employment may grow to 600 within three years. Workers will be sought from the Tucson-area labor force. Lockheed, which signed a 30-year lease with the Tucson Airport Authority, says the center will provide work on commercial aircraft, similar to a facility it operates in Greenville, S.C.

Sky Harbor International Airport is seeking non-stop air service between Phoenix and Amsterdam by 1992. In current talks between the United States and the Netherlands, Sky Harbor and Schiphol Airport in Amsterdam are pushing for daily service between Phoenix and Amsterdam, which is expected to translate into a $52 million annual windfall for the Arizona economy.

American Telephone and Telegraph Co. (AT&T) plans to open a directory assistance center in Tucson that will initially employ between 90 and 110 people. The facility, which will open in the first quarter of 1991, will service calls from 11 western states.

GOVERNMENT -- **Gordon-Darby Inc.** of Louisville, Ky., has been awarded a $90 million, 7½-year contract to run Arizona's vehicle-emissions testing beginning in 1991. The state Department of Environmental Quality chose Gordon-Darby over Hamilton Test Systems, Inc. of Phoenix, which has overseen the program since 1976.

GENERAL - Only 20 percent of Arizona's jobless collected **unemployment insurance** in 1988, ranking 43rd among the 50 states and District of Columbia. A report by the **Center on Budget and Policy Priorities** showed 82,700 of the state's 104,156 unemployed did not qualify or did not apply for unemployment insurance (UI), or exhausted their UI benefits.

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